



Centre de philosophie  
de la mémoire  
Centre for Philosophy  
of Memory

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# ISSUES IN PHILOSOPHY OF MEMORY 2

01-04 July 2019 • Grenoble

Organizers: Kourken Michaelian • Denis Perrin • André Sant'Anna

# Issues in Philosophy of Memory 2

July 1-4, 2019

Université Grenoble Alpes

Organizers:

Kouken Michaelian  
Denis Perrin  
André Sant'Anna



<http://phil-mem.org/>

## Practical information

### Meeting rooms

The conference will take place in the BSHM building. See the CPM website (<http://phil-mem.org/>) for directions.

Keynote sessions will be held in the amphitheatre.

Parallel sessions will be held in the following rooms:

A sessions: Room A202.

B sessions: Room A203.

C sessions: Room A204.

### *Lunches and coffee breaks*

Coffee breaks will be held in the common area adjacent to the rooms for the parallel sessions.

Lunches will be held in the ARSH building (next to the BSHM building) in rooms TD1, TD2, and TD3.

### *Sightseeing and conference dinner*

The conference dinner will take place on Wednesday, July 3. Participants will meet at 18:00 to take the cable car up to the Bastille overlooking Grenoble. Dinner will be served at a restaurant at the Bastille starting at 20:00. The total cost for the cable car and the meal will be 30 EUR. Participants will be asked to pay in cash when they arrive at the conference.

### *Contact information*

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The Centre for Philosophy of Memory is supported by the IDEX project "Université Grenoble Alpes : Université de l'innovation".

# Schedule

## July 1 – Morning

09:00	welcome							
	keynote: Senor							
10:00	session 1A (Sant'Anna)	Debus	session 1B (Senor)	Frise/McCain	session 1C (Perrin)	Beninger		
11:00	break							
	Song		Sorgiovanni		Di Bona			
	Walker		Sakuragi					
12:00								
13:00	lunch							

July 1 – Afternoon

14:00	symposium: McCarroll (Sant'Anna) McCarroll, Arcangeli, Robins, Trakas					
15:00						
16:00	session 2A (Robins)	Mahr	session 2B (Hutto)	Caravà	session 2C (De Avila)	Berninger
	break					
17:00		Dranseika		Rusanen		Höchstmann
	keynote: Hutto					
18:00						

July 2 – Morning

09:00	keynote: Dokic					
10:00	session 3A (Bernecker)	De Brigard	session 3B (Fernandez)	Lin	session 3C (Dutra)	Colaço
11:00	break					
12:00		Attah		Viera		Ames
		Pan		Apostolova/Davies		Najenson
13:00	lunch/PhOMO business meeting					

July 2 – Afternoon

14:00	keynote: Cosentino					
15:00	session 4A (Dokic)	Rivadulla Duró	session 4B (Cosentino)	Kovalczyk	session 4C (Craver)	Belvedresi/Trakas
		Kim		Gérardin-Laverge		McDougal
16:00						
	break					
		Dutra		Perovic		Parmar
17:00						
	keynote: Bernecker					
18:00						

July 3 – Morning

09:00						
	keynote: Craver					
10:00	session 5A (Kovalczyk)	Robins	session 5B (Schirmer)	Tucker	session 5C (Schechtman)	Fernandez
11:00	break					
		Schwartz		Wang		Aronowitz
		Andonovski		Vieira Rodrigues		Boyle
12:00						
	lunch					
13:00						

July 3 – Afternoon

14:00	symposium: teaching/Senor (Michaelian)	
	Senor, De Brigard, James, Schirmer dos Santos	
15:00		
16:00		
17:00		
18:00	sightseeing + conference dinner	

July 4 – Morning

09:00	keynote: Schechtman			
10:00	session 6A (Trakas)	Strevell	session 6B (James)	Barner
				Retkoceri
				session 6C (Hoerl)
11:00	break			
	Junges Panciera		Menager	
			Corréa	
12:00	Decaix		Brown	
			Gludemans	
	lunch			
13:00				

July 4 – Afternoon

14:00	keynote: McCarroll			
15:00	session 7A (Gérardin-Laverge)	Grunbaum	session 7B (McCarroll)	de Avila
		Trakas		Sorgiovanni
16:00				
	break			
	keynote: Hoerl			
17:00				
18:00				

Abstracts

## Keynotes

### *Remembering Absence*

Sven Bernecker (University of Cologne/University of California Irvine)

This paper deals with the phenomenology and epistemology of memories of omission, that is, memories that something did not happen. We do not seem to remember the absence of things in the same way that we remember the presence of things. But at the same time, remembering absence is not reducible to forming beliefs about one's experiential memories. Does the fact that I ostensibly remember that something did not happen allow me to know that it did not happen? The answer to this question crucially depends on whether remembering that something did not happen is merely the absence of evidence of it happening or whether it amounts to evidence of the absence of it happening.

### *Self-control, mental time travel, and the temporally extended self*

Erica Cosentino (Ruhr-Universität Bochum)

Intertemporal choice scenarios are those in which someone has to make a choice whose consequences play out over time. In these scenarios, the capacity to exercise self-control involves making a choice that does not provide an immediate advantage for the present self and delivers a benefit for the future self instead. I argue that the extent to which one can resist temptation in those scenarios is a function of the extent to which one cares about one's future self. Caring about one's future self entails having a temporally extended self. Given that mental time travel is the main responsible for the coming about of the temporally extended self, I acknowledge its importance in self-control. After clarifying what my hypothesis does not imply about the relationship between mental time travel and self-control, I discuss two puzzles concerning (a) the phenomenology of resisting temptation and (b) the explanatory power of the temporally extended self, and I suggest a possible solution to each of them.

### *Living without Memory: Agency in Amnesia*

Carl Craver (Washington University St. Louis)

The capacities to consent and to promise lie at the foundation of our moral psychological orientation to others. As a step to assessing the potential relevance of episodic thought to our moral psychology, I consider whether, to what extent, under what conditions, and how the absence of episodic thought in episodic amnesia does and does not impact on one's possession of these basic moral psychological capacities. I consider these questions in light of both findings from neuropsychology and conclusions gleaned from more philosophical arguments. The contrast of consent and promising is especially interesting because promising, but not consent, involves committing one's self to act in a

desire-independent way in the future and so plausibly contains, as a constitutive feature, a kind of moral-psychological demand individuals with amnesia cannot satisfy. I explore the conditions under which this demand can and cannot be met with an eye toward understanding how episodic memory contributes to our lives as moral agents more generally.

### *Episodic memory as constrained imagination: A skeptical look*

Jérôme Dokic (École des hautes études en sciences sociales)

A view that has recently re-emerged is that episodic memories are in fact imaginative in nature, or that they are nothing but imaginings (with the appropriate pedigree). The main challenge of this view is to explain apparent psychological and epistemological asymmetries between episodic memories and past-oriented imaginings: the former but not the latter typically incline us to form judgements about the past, in a way which seems to be, at least sometimes, knowledge-conducive. My aim in this presentation is twofold. First, I intend to clarify the nature of our ability to constrain our imagination to reflect the facts and use it as a source of judgment and knowledge. My claim here is that such ability involves metacognitive evaluation of the relevant imaginings. Second, I shall examine (with a skeptical look) whether memories can be construed as specific ways of constraining one's imagination.

### *A 'knowledge first' approach to episodic memory*

Christopher Hoerl (University of Warwick)

According to an influential recent approach in epistemology, attempts to analyse knowledge as a matter of belief combined with some further conditions have been misguided. Instead, proponents of this 'knowledge first' approach argue that we should take the notion of knowledge as basic and seek to illuminate the meaning of other epistemologically relevant notions such as belief by showing how they are connected to that of knowledge. In this talk, I offer an account of the nature of episodic memory in the spirit of this general approach. In the literature on episodic memory, too, there is a long tradition of attempts to analyse episodic memory as a combination of a certain kind of representational state together with some further conditions. I outline some challenges for this type of approach to episodic memory before showing how these challenges can be addressed by an approach that simply construes episodic memory as the retention of a particular type of knowledge.

*Remembering by imagining and narrating: Memory with and without content*

Daniel Hutto (University of Wollongong)

This presentation provides an overview of how a Radical Enactive account of Cognition, REC, conceives of procedural, purely episodic and autobiographical remembering. Particular attention will be given to explicating REC's account of purely episodic remembering, which embrace the hypothesis that such remembering is best understood in terms of recreative simulative imagining (Michaelian 2016). According to REC, instances of episodic remembering are grounded in a reconstructive process. Memories are simulatively imagined even the processes that underwrites such imagining does not involve the passive recollection or retrieval of stored contents. To motivate this view, important comparisons will be made with predictive processing, PP, account of memory (e.g. Clark 2016) and Aronowitz's (2018) hypothesis that memory involves active curation and thus kind of modelling that aims as "structuring and altering stored contents in order to make correct, useful and relevant information available for retrieval". It will be argued that a REC alternative is to be preferred over cognitivist accounts of memory which are conservatively and problematically attached to the idea of inner models and stored contents. In conclusion, building on Michaelian and Sant'Anna (2019), it will be clarified to what extent radical enactivism's take on purely episodic remembering, in fact, aligns and even agrees with causal and post-causal theorists of memory.

*Looking at the Self: Perspectival Memory and Personal Identity*

Christopher McCarroll (University of Antwerp)

Marya Schechtman and Galen Strawson both appeal to autobiographical memory in developing their accounts of personal identity. Although both scholars share a similar conception of autobiographical memory, they use it to develop theories of personal identity that are radically distinct. Memories that are relevant for personal identity are generally considered to be personal (autobiographical) memories of those events in one's lifetime to which one can gain first-personal access: memories from-the-inside. Both Schechtman and Strawson base their discussion of personal identity on exactly this type of memory. Empirical evidence shows, however, that personal memory imagery is not only visualised from-the-inside, from a 'field' perspective. Personal memories may also involve 'observer' perspectives, in which one sees oneself, from-the-outside, in the remembered scene. Both Schechtman and Strawson appeal to the notion of remembering from-the-inside, but they remain silent about observer perspectives in personal memory. I suggest that accounts of personal identity that appeal to memory should consider observer perspectives as one aspect of personal memory. I explore the implications that the acknowledgment and inclusion of observer perspectives would have for both Schechtman's and Strawson's accounts.

I suggest that observer perspectives may help bolster Schechtman's account of diachronic continuity, but seem to put pressure on Strawson's notion of non-diachronic self experience.

*They Can't Take That Away from Me: The Value of Episodic Memory*

Marya Schechtman (University of Illinois Chicago)

People tend to cherish their memories, often describing them as treasures to be stored away and protected. Reminiscing is a common pastime, and conditions that lead us to lose our memories are often seen as threats to the very existence of the self because 'our memories make us who we are'. There is, of course, a great deal of cultural and personal variation, but this basic phenomenon is robust and widespread. This talk seeks a better understanding of why we value our memories in some of the particular ways that we do. It argues that that one important reason is that the mental time travel aspect of the relevant sorts of memories allows us not only to represent, but also to reinhabit, or reinvok, past first-person perspectives. This provides a tool for managing affect and behavior through recollection and is also connected to the development of a complex form of self-experience that we value for many reasons (hence the sense that losing memories is an assault on the self). Having described some of the basic mechanisms at work, I conclude by reviewing some outstanding questions and directions for the development of the basic idea presented, including potentially interesting connections to discussions about the relation between memory and imagination.

*Preservationism and the Problem of Reconstructive Memory*

Thomas Senor (University of Arkansas)

Preservationism is the thesis that, other things being equal, the epistemic status of a memory belief is a function of the status the belief had when it was first formed. Advocates of this theory claim that it is a theoretical advantage of their position that there is a fit between the memory's psychological role and its epistemology. That is, memory's primary function is to preserve beliefs and experiences. However, some theories of the psychology of memory appear to cast doubt on the idea that memory is primarily preservative. Rather than recall being simple retrieval from storage, memory is often largely reconstructive: memories are made up (or at least put together) when we experience them. What are the implications of reconstructive theories of the psychology of memory for the preservationist accounts epistemology of memory? This paper offers an answer this question.

## Symposia

**Symposium on *Remembering from the Outside: Personal Memory and the Perspectival Mind* (OUP 2018), by Christopher McCarroll**

Organizer: John Sutton (Macquarie University)

Speakers:

Christopher McCarroll (University of Antwerp)

Margherita Arcangeli (Institut Jean-Nicod)

Sarah Robins (University of Kansas)

Marina Trakas (Conicet)

**Symposium on teaching philosophy of memory and on *A Critical Introduction to the Epistemology of Memory* (Bloomsbury 2019), by Thomas Senior**

Organizer: Kourken Michaelian (Université Grenoble Alpes)

Speakers:

Thomas D. Senior (University of Arkansas)

Felipe De Brigard (Duke University)

Steven James (West Chester University)

César Schirmer Dos Santos (Universidade Federal de Santa Maria)

## Prize winners

Thanks to generous support from the CNRS GDR Mémoire, a prize of 400 EUR was awarded to each of the seven best submissions by early-career researchers.

Nikola Andonovski (Johns Hopkins University)

Ali Boyle (University of Cambridge)

Marta Caravà (University of Bologna)

Vilius Dranseika (Vilnius University)

Johannes Mahr (Central European University)

Shen Pan (University of Maryland)

Si-Won Song (University of Kansas)

## Contributed talks

### Session 1A: Forgetting

*Choosing to Remember, and Choosing to Forget*  
Dorothea Debus (Universität Konstanz)

The present paper starts out from the observation that in our ordinary everyday lives, we sometimes do hold each other responsible for remembering something, or for having forgotten something, and that in at least some contexts, this seems a reasonable thing to do. But then, in holding someone responsible for a particular outcome, we presuppose that it was (in some sense) their choice to bring about the outcome we hold them responsible for. Thus, when we hold each other responsible for remembering or for having forgotten something, we thereby presuppose that (in some sense) it was the relevant person's choice to remember, or that it was their choice to have forgotten. The assumption underlying our practices of praising and blaming each other for remembering, or having forgotten something, therefore is that at least sometimes, we can choose to remember, and at least sometimes, we can choose to forget. But then, how could anybody possibly choose to forget something? Isn't this impossible? And what could it possibly mean to say that someone 'chooses to remember' something? These are the questions I aim to address in the present paper. More specifically, I suggest that choice requires regulation, that is, in order for a subject to be said to have chosen to forget, or to remember, something, it is necessary that the subject did regulate the relevant aspect of her own mental life, that is, that the subject was actively involved, in a goal-directed way, in bringing it about that the relevant thing was forgotten, or remembered. In order to spell out how a subject might possibly 'regulate' her remembering or forgetting something, I suggest we consider the actions that subjects might possibly (be able to) engage in in relevant contexts, and defend what I call the 'Agential Difference Claim'. In a sense to be made more precise during the talk, the 'Agential Difference Claim' holds that (A1) the actions which subjects engage in when they intervene in their own mental lives with the goal of forgetting something are always indirect and usually precise, whereas (A2) the actions which subjects engage in when they intervene in their own mental lives with the goal of remembering something are often direct and usually imprecise. Thus, while remembering and forgetting clearly differ most fundamentally in that remembering is the retention, and forgetting the loss, of relevant information, we find that remembering and forgetting also differ in characteristic ways with respect to how subjects might be actively involved with respect to those two aspects of their own mental lives: Remembering and forgetting 'resist' and 'submit' to a subject's attempts at intervention and regulation in characteristically different, and usually diametrically opposed, ways: The 'Agential Difference Claim' captures an important 'asymmetry' between goal-directed interventions in remembering, and goal-directed interventions in forgetting.

*Distinctions in Forgetting: A Challenge to Simulationism*  
Si-Won Song (University of Kansas)

Philosophers of memory have paid far more attention to remembering than to forgetting. This is beginning to change, with some recent work on the nature and significance of forgetting (Frise, 2018 and Bernecker, 2018, respectively, see also Michaelian 2011). The next step is to evaluate theories of remembering in terms of their ability to accommodate these emerging accounts of forgetting. One central feature of forgetting that is widely agreed upon is the distinction between availability and accessibility (Frise 2018, Tulving and Pearlstone 1966). Philosophers sometimes express this distinction in terms of a contrast between temporary and permanent forgetting (Bernecker 2010, ch. 4). An instance of temporary forgetting would be failing to recall where one met a former colleague, only to recall later that they had attended a seminar together. In contrast, an instance of permanent forgetting would be being unable to recall meeting said colleague that persists, even after cues, and is never resolved. In the first case, the information is available in memory, but for some reason or another cannot be accessed at time  $x_1$ , but can be accessed at time  $x_2$ . In the second case, it appears that the information is no longer available and so can never be accessed. This distinction is further supported by studies conducted on Alzheimer's and Dementia patients (Giffard et al. 2001; Cortes, Balota, Sergent-Marshall, Buckner & Gold, 2006) where some

*How Forgetting Shapes the Self*  
Camille Walker (University of Essex)

Accounts of the relationship between memory and 'the self' abound, yet few devote much space to the role that forgetting plays in shaping who we are. Drawing on recent neuroscientific evidence of how infrequently our episodic memories present as repeated and perfectly identical past experiences (despite these successive modifications often going unnoticed), I suggest an appraisal of the phenomenon of forgetting and its relationship to memory is needed. Accordingly, I will argue for a philosophical evaluation of forgetting as a non-deliberative but nevertheless creative 'sculptor' of the content of our acts of remembering and, consequently, of self-experience.

To this end, the bulk of my paper will discuss the potentially conflicting notions of the minimal and narrative self with a view to situating the constitutive role of forgetting for self-experience. In light of the minimalist commitment that our pervasive and pre-reflective 'sense of mineness' (minimal self-experience), does not involve any appeal to memory or, for that matter, to forgetting, I will begin by questioning the legitimacy of crediting the status of a satisfactory account of minimal selfhood to this purely formal notion. My paper is thus motivated by Marya Schechtman's response to Dan Zahavi's critique of the narrative self, in which we find an intriguing compromise between these competing accounts of selfhood. My investigation will involve a similar

shift of focus away from radical circumstances in which we might say a minimal self can be experienced in isolation and instead towards the increasing sophistication of our self-experience facilitated, in part, by our memories.

After negotiating this debate in terms of the exclusion or inclusion of the role of memory in self-experience, I will seek to elucidate the productive relationships that hold within a multi-layered self; responsive to cases where explicit narrative self-conceptions are no longer possible, but self-awareness remains (for instance, individuals diagnosed with types of dementia in which a degree of memory-loss and forgetting is symptomatic). I will close by reintegrating the insights from the first section to underscore the creative role of forgetting. Forgetting, I will argue, is that which plays a constitutive part for both our explicit narrative self-conceptions and for our implicit pre-reflective self-awareness. By combining the bareness of minimal self-awareness with the more sophisticated forms of self-experience demonstrated in recent narrativist scholarship, this paper will offer an original contribution to the ongoing debate concerning the nature of self-experience and in so doing open up further avenues of research regarding the relationship between forgetting and the self.

## Session 1B: Epistemology

### *Forgetting Memory Skepticism*

Matthew Frise (Santa Clara University)

Kevin McCain (University of Alabama at Birmingham)

Memory skepticism denies that we have some important epistemic good that is connected to memory and that we typically believe we have. One kind of memory skepticism denies, in particular, our justification for thinking memory tends to deliver true beliefs provided that it initially received true beliefs. In this paper we develop and respond to this skepticism. It could threaten memory in such a way that we would altogether lack beliefs. If it threatens memory in this way, then the skepticism is ultimately self-defeating. If it does not threaten memory in this way, then the skepticism leaves a foundation for an inference to the best explanation response. We articulate this response and explain why it is not problematically circular.

### *Epistemic Preservation in Memory*

Ben Sorgiovanni (The Queen's College, University of Oxford)

Can memory generate justification, or merely preserve it? Some who think that memory can generate justification (hereafter generativists) do so because they are impressed by cases of so-called inattentive remembering—cases like the following: Clifford has perceptual evidence that construction has begun on the freeway, but he does not form the belief that construction has begun. Later, he recalls his earlier perceptual experience and forms, on its basis, the justified belief that construction has begun. (Adapted from the case presented in Lackey 2005, p. 650) Such cases seem to show that a subject can, on the basis of memory, form for the first time a justified belief that p. To this extent, they show that memory can generate justification in the sense that it can provide a basis for the formation of novel justified beliefs.

No doubt this is a sense in which memory can generate justification. But it has struck many, including many generativists, as an uninteresting sense (Fernández 2016, pp. 628-9; Bernecker 2010, p. 99; Senor 2007, pp. 199, 207-8). The concern might be expressed this way. Everyone—preservationists and generativists alike—should agree that memory can generate justification in the sense that it may give rise to novel justified beliefs. What is at issue in the debate between preservationists and generativists is whether memory can improve one's epistemic status (Fernández 2016, p. 629). But inattentive remembering cases don't show that. Plausibly, Clifford is no more justified in believing that construction has begun on the freeway when he recalls his earlier perceptual experience than he was at the time of experience. What distinguishes Clifford's epistemic status at the time of his perceptual experience from his position at the moment of recall 'is awareness or conceptualisation but not justification' (Bernecker 2010, p. 99).

In response to this concern about cases of inattentive remembering, several generativists have developed arguments for their view which appeal to the generative power of memory with respect to content (Fernández 2016; Michaelian 2011). In addition to giving rise to novel beliefs, memory can, it is claimed, generate novel content. Further, understanding the generative power of memory with respect to content is key to understanding its generative power with respect to justification.

In this paper, I raise two objections to arguments for generativism about memory from content generation. First, they fail to show that memory is a basic source of justification, where a source of justification is basic just in case the justification which it generates does not depend on the subject's having justification from some other epistemic source (such as perception, introspection, testimony, and so on). Second, the sense in which such arguments show that memory is generative is no more substantive—and hence no more troubling to the preservationist—than the sense in which cases of inattentive remembering show that memory is generative. Appreciating these two points helps us to see more clearly what it is that the preservationist about memory is committed to.

*Memory Beliefs and Dispositional Coherentism*  
Shin Sakuragi (Shibaura Institute of Technology)

This presentation focuses on one of the problems raised by Alvin Goldman against internalist proposals to memorial justification. The problem consists of two scenarios which contrapose each other. In the original scenario, Goldman describes a case in which a subject appears to be \*justified\* in holding a belief acquired in the past with \*good\*, but now forgotten evidence. In response to Conee and Feldman's replies to the original scenario, Goldman later proposes another scenario in which a subject appears to be \*unjustified\* in holding a belief acquired in the past with \*bad\*, but now forgotten evidence.

The two forgotten evidence scenarios present a dilemma to the internalists who explain justification for memory beliefs by appeal to the subject's concurrent mental states. In the good evidence scenario, they try to specify certain justifiers for the subject's belief in his concurrent mental states. Meanwhile, justifiers of the same type appear to justify the belief even in the bad evidence scenario. Accordingly, they are forced to give up either their appeal to the subject's concurrent mental states or the intuition that the subject in the bad evidence scenario is justified.

Conee and Feldman respond that the bad evidence scenario is actually of Gettier type; i.e., the subject doesn't know what he believes, yet he is justified in holding the belief. However, their response does not satisfy preservativists, like Goldman, who take the only epistemic role of memory is to preserve the original justificatory status of a belief. From the preservativist's view point, it is simply unacceptable that the subject in the bad evidence scenario is justified. For, in such

a scenario, an originally unjustified belief turns into justified one only in virtue of its retention by memory.

In this presentation, I'd like to defend the generativism—the claim that memory plays an epistemic role in generating justification for retained beliefs—in light of Sosa's theory of epistemic competence. In my view, justificatory statuses of both subjects in good and bad evidence scenarios are better illuminated by appeal to their epistemic competences than by simple-minded preservativist proposals.

I call my proposal dispositional coherentism. Following some of the evidentialist claims made by Conee and Feldman, I argue that justification for one's memory beliefs hinges upon his overall dispositional states. Dispositional coherentism claims that one's memory beliefs are justified by his epistemic competence which consists in his dispositions to coherence and general truthfulness, as well as to self-reflection on both elements.

After carefully classifying different bad evidence scenarios, I try to specify what disposition constitutes the subject's epistemic competence in each bad evidence scenario. One's epistemic competence resides in both preservation and dismissiveness of beliefs. To maintain coherence and general truthfulness of a belief system and stay self-reflective on them, one has to not only preserve concordant true beliefs, but also dismiss discordant untrue beliefs. I emphasize two important functions of memory; reliable recollection and sound forgetfulness. I explicate why they are dispositions and how they ground one's epistemic competence.

## Session 1C: Other forms of memory

### *Is Working Memory Always Sensory Based?*

Max Beninger (Duke University)

Working memory is conceived of as a “mental workspace” that allows us to consciously maintain and manipulate a limited amount of information. Recently, Peter Carruthers (2015) has argued that working memory is always sensory based, including only “mid-level” sensory representations. One major upshot of Carruthers’ view is that non-sensory representations (including beliefs, intentions and judgements) cannot figure among the contents working memory (Carruthers, 2015, p. 7). The aim of my paper is to critically assess Carruthers’ view. I ultimately argue that Carruthers’ view is incorrect: I contend that working memory can, in fact, maintain non-sensory representations in addition to sensory-based ones. My paper is separated into two parts. The first part outlines and critiques Carruthers’ argument for his sensory-based account. The second part provides positive evidence for the existence of non-sensory working memory representations.

Carruthers’ main argument for his sensory-based account rests on claims about the neural mechanisms of working memory. According to Carruthers, working memory encoding is achieved via the allocation of attention: attention selects which representations are to be maintained, and boosts them above the threshold required for access to working memory. Additionally, Carruthers also claims that attention exclusively targets mid-level sensory areas of the cortex (Carruthers, 2015, p. 91). Putting these two premises together, Carruthers arrives at the following argument:

1. Attention is required for representations to enter working memory.
2. Attention only targets mid-level sensory areas.
3. Therefore, only sensory-based representations figure among the contents of working memory.

I take issue with Carruthers’ second premise. Carruthers main motivation for claiming that attention only targets mid-level sensory areas is that we lack evidence for attention outside of sensory cortices. But this line of reasoning is problematic. The fact that most attention research focuses on attention to sensory stimuli does not preclude the possibility that attention may also modulate activity outside of sensory areas. In fact, a study by Lau and colleagues (2004) provides evidence that attention can be directed towards intentions, resulting in the modulation of activity in the pre-supplementary motor area (which is outside of traditional sensory areas).

Finally, positive evidence for the existence of non-sensory working memory representations comes from a recent fMRI study by Lee and colleagues (2013). Lee and colleagues showed participants images of various objects (e.g., a clock, watch, motorcycle, or scooter) followed

by a brief delay and a memory test. In one condition, participants were required to remember the fine-grained visual details of the presented object, while in another condition they were required to remember the abstract category of the object (e.g., timepiece or vehicle). Lee and colleagues found that when participants were required to remember fine-grained visual details, stimulus-related activity was present in occipitotemporal areas; conversely, when participants were required to remember abstract categories, stimulus-related activity was present in the prefrontal cortex. This finding supports a cortical dissociation between sensory and non-sensory working memory: visually-based working memory representations appear to be stored in areas of the visual cortex, whereas abstract, categorical working memory representations appear to be stored in frontal association areas.

### *Auditory Memory and the Auditory Object*

Elvira Di Bona (Polonsky Academy, The Van Leer Jerusalem Institute)

What it is that we hear when we listen? Philosophers have provided various answers to this question based on different characterizations of the auditory object. Some think that we only hear sounds and their audible properties, which are loudness, pitch, and timbre; others that we also hear sound sources’ features, such as their spatial location or material constitution. Nevertheless, it is generally taken for granted that temporal cues – especially the speed with which a succession of sounds occurs, the duration of each sound composing this succession, and the temporal order of those sounds – play a crucial role in the formation of the auditory object, and that auditory memory is fundamental for the occurrence of such temporal cues. It is because we are equipped with auditory memory that we can employ the temporal cues that are essential to the building of the auditory object. And this is true regardless of the position on the auditory object we embrace.

This paper is divided into two parts. In the first part, I show that the auditory object is essentially a temporal object. In order to do that, I discuss the two-stage process which determines the auditory stream segregation. This process is constituted by the primitive grouping and the schema-based grouping (Bregman 1990). Once the primitive grouping, which has the aim of segregating auditory streams, has taken place, the auditory system categorizes new sounds by virtue of an “Old-Plus-New” heuristics, which is at the core of the schema-based grouping. Both groupings employ temporal cues in order to fulfill their tasks. This justifies the claim for which the auditory object is a temporal object.

In the second part of the paper, I show how auditory memory is a necessary capacity for the auditory stream segregation to happen, and so for the genesis of the auditory object. I specifically focus on the temporal cues of the speed in which a succession of sounds takes place, the duration of each sound composing this succession, and the order in which sounds unfold. These temporal cues obtain thanks to

the auditory memory - which is a sensory memory that permits to remember the beginning of a certain sound, its duration, and its being embedded in a specifically ordered sequence of sounds that evolves over time.

My conclusion is that auditory memory is a necessary capacity for the emergence of the auditory object from the chaos of the unordered auditory stimuli we are exposed to. This capacity needs to be acknowledged before we start a discussion on what it is that we hear when we listen, and before we initiate the debate on the difference between hearing sound sources' properties and hearing sound and its audible qualities.

## Session 2A: The concept of memory

*Why do we think what we think about what remembering is?*  
Johannes Mahr (Central European University)

The most influential account of 'what remembering is' in contemporary philosophy has arguably been Martin and Deutscher's causal theory. According to the causal theory, remembering requires the existence of an appropriate causal link between a past experience and a current representation of that experience. Here, I will argue that this intuition is an outcome of the operation of episodic memory. That is, I will argue that some of the intuitions which philosophers have brought to the table when trying to identify the ontological nature of memory are not descriptive of memory (or 'remembering') but are rather an outcome of its psychological operation. Episodic memory presents itself as being a memory as described by the causal theory of memory. However, this presentation is misleading: Most of the conditions which the causal theory identifies as being ontologically necessary for memory are not psychologically necessary for episodic memory to occur. Instead, episodic memory functions in a way so as to make those conditions seem intuitive requirements for something to count as memory. I will thus make no claim about the ontological nature of memory or whether episodic memory as I will describe it should qualify as memory in an ontological sense. Instead, I will give a psychological account of the architecture of the episodic memory system from which (I will claim) our intuitive notion of remembering results. On this view, it will turn out that rather than being a descriptive account of memory, the causal theory provides a normative one: It specifies how remembering should operate for us to accept the claims made on its basis as justified.

*False memories and quasi-memories are memories*  
Vilius Dranseika (Vilnius University)

In this paper, I present new data bearing on two constraints that are often taken to be essential features of our ordinary use of 'remembering' and 'having a memory': the factivity constraint (i.e. that one can be truly said to 'remember' some event only if that person originally experienced or observed that event) and the strong previous awareness condition (i.e. that remembering presupposes identity between the person who remembers an event and the person who originally experienced that event). Studies were conducted in Lithuanian language (4 studies, combined N=746). To the best of my knowledge, this is the first attempt to address empirically the question whether these two constraints are features of our ordinary concept of memory. The present set of studies suggests that the factivity constraint and the strong previous awareness condition are not essential features of our ordinary use of 'remembering' and 'having a memory of'. Concerning the factivity constraint, artificial memory and misidentified dream memory vignettes involved violations of factivity, and in all these cases

study participants tended to agree that the agent ‘remembers’ or ‘has a memory’. The fact that study participants tended to agree that the agent ‘remembers’ and ‘has a memory’ in cases of having implanted other people’s memories, suggests that the ordinary notion of memory is not bound by the strong previous awareness condition either. These findings, of course, should be taken as only the first preliminary and very limited step in the direction of better understanding of constraints that rule our ordinary notion of remembering. Among limitations of this study, I would like to stress the very limited set of experimental vignettes used, the fact that it is unclear whether the results would generalize to other languages than Lithuanian, as well as that some of the vignettes were based on science fiction scenarios. In summary, the data provided in this report provide some evidence to motivate skepticism concerning whether the factivity constraint and the strong previous awareness condition are essential features of our ordinary use of ‘remember’.

## Session 2B: Enactivist approaches

*Enactive-distributed forgetting. An exploration into cognitive and affective aspects of “memory loss”*

Marta Caravà (University of Bologna)

Why do we forget? Forgetting is a key feature of our lives (Kuhl et al. 2007; Wimber et al. 2015). From a cognitive perspective, forgetting seems to play an important adaptive function. We may forget redundant details of past events in order to avoid an information overload in cognitive processes, or we may forget things that do not help us to cope with present and future conditions, thus fostering the attunement of our behavior to the context (Nørby 2015). Forgetting plays also a crucial role in our affective lives: it seems to be crucial for emotion regulation. One may forget negative events to foster the emergence of positive emotions or to prevent the negative ones from lasting over time (Nørby 2018), or one may reappraise affective responses to negative memories, by forgetting part of them and by substituting them with new thoughts (Engen, Anderson 2018). In my presentation, I will discuss the problem of forgetting from both a cognitive and affective perspective. My argumentation will rely on non-brain bounded explanatory paradigms (i.e. embodied, enacted, and distributed approaches to cognition), which are gaining more and more importance in research on memory (Casasanto, Dijkstra 2010; Gallagher 2017; Hutto, Myin 2017; Michaelian, Sutton 2013; Tewes 2016). This body of research holds that memory does not consist in an internal storage of contents, which would be encoded by the brain as representations of past experiences (Hutto, Peeters 2018). To different extents, these explanations rather hold that memory is so deeply influenced by our body, by our actions and by the socio-cultural and inter-subjective environment we inhabit, that memory activities themselves are realized or instantiated by these extra-neural elements or processes. In this perspective, memory is not something we have in our heads, but it is rather a reenactment of the past (Hutto, Peeters 2018; Kiverstein, Rietveld 2018), which is usually supported by different kinds of scaffoldings (e.g. objects of various kinds, words, other persons; Bietti, Sutton 2015; Bietti 2013). In which way does this explanatory framework apply to the phenomenon of forgetting? This is a challenging question, especially for an enactive (viz. content-less) approach to memory. As matter of fact, current approaches to forgetting conceive of this phenomenon as the loss of mental contents stored in memory. To consider this problem, I will suggest that enactivism might try to account for “forgetting without content” by resorting to the concept of enaction. Forgetting might indeed be described as the active process through which we bring forth salient cognitive aspects of our past experiences, covering up other memories with new actions and behaviors. From what concerns the relation between emotion regulation and forgetting, I will suggest that forgetting negative memories might be explained as the active and distributed restructuring of our personal narratives.

Distributed and enactive “strategies” of forgetting may include the interpersonal re-creation of a different past supported by linguistic and embodied interaction, the restructuring of our physical environment, or the acquisition of new habits of action capable of substituting the old ones.

### *Reinforcing Representations*

Anna-Mari Rusanen (University of Helsinki)

It is a widely defended hypothesis that our brains produce complicated, memory based internal models or simulations that enable us to perceive, control and plan complex adaptive sequences of action, think complicated abstract thoughts and predict future events. This hypothesis is often seen as committed to a thoroughly representational view of memory systems.

Critics of the representational view argue that neurocognitive sciences should abandon this conceptual framework. For example, Hutto and colleagues (2018) complain how “scientific research on memory is rife with talk of “memory traces,” of “encoded and retrieved information,” and of “the storage and retrieval of information and representations”. Instead, they propose that scientists should take a “radical enactivist” attitude, according to which memories should not be explained by appealing “to identifiable inner content bearers”. Instead, they propose, we should conceive “remembering as a matter of ‘on-the-fly’ construction that can be grounded in structural synaptic changes in the brain as well as other structural changes in the environment without assuming the existence of stored and retrieved contents”. This is, remembering should be seen as non-representational.

However, as I will argue in this paper, Hutto and colleague’s antirepresentational criticism presupposes such a weak notion of representation, which is not fully in keeping with the way representational notions are used in current computational cognitive neurosciences. Instead, as I argue, in some recent studies in terms of Reinforcement Learning on memory systems, they can be given an exact computational and thoroughly representational interpretation. Moreover, these representations are not seen as weak, but as strong representations in a way that is bypassed by Hutto and colleague(s).

Furthermore, RL is the dominant and mathematically most well understood computational approach in cognitive neurosciences. Hence, it should taken into account, when we talk about “representations” and their explanatory status. Thus, I’ll conclude that RL – among some other approaches in computational neurosciences – provide such a representational view on memory systems, which makes Hutto and colleague’s recent anti-representational criticism to lose its edge.

## Session 2C: Various

### *Collective Memory and Understanding the Past*

Anja Berninger (University of Stuttgart)

In this paper, I will focus on collective memory and the relation in which it stands to knowledge and understanding. “Collective memory”, as I want to use the term here (and as it is often used in philosophy of history), refers to the memory of large groups such as whole nations or religious communities. Furthermore, the memory in question extends over generations. Thus we might say, for example, that the British remember the first world war even in cases where there is no one still alive who actually lived through that war. Historians have taken care to stress that this form of memory is epistemically problematic. What the general public remembers and how it remembers those events, it is claimed, is often the result of imagination and (in some cases) of strategic influence by certain (political) groups. In any case, it does not represent a truthful account of the events that took place. In this respect collective memory is seen as clearly different from the efforts of historians that are aimed at delivering a true account of those events. It is sometimes concluded that collective memory is largely a political (and not an epistemic) affair. In the paper, I want to show that while collective memory does not deliver knowledge, it may yet be of epistemic (and not only political) relevance. Thus, I will argue that (in ideal cases at least) collective memory can be a source of understanding the past. I start my discussion by briefly elaborating on the notion of collective memory. Here, I highlight that examples such as “remembering the first world war” indicate that memory is not limited to purely semantic forms, but rather does contain phenomenal aspects more frequently associated with episodic or autobiographical memory. Furthermore, I stress that we do not need to make strong ontological assumptions about “group consciousness” to assume that there is such a thing as collective memory in this sense. In a second step, I then turn to the epistemic issue. Here, I stress that collective memory will generally involve aspects of construction. I highlight that the construction in question is different from those notions that have been stressed in recent accounts of individual memory (e.g. by Michaelian and de Brigard). Thus, while claims that memory can still be knowledge-conducive is plausible on the individual level, these accounts cannot be used on the group level. I then utilize current accounts of understanding (see e.g. the recent work of Catherine Elgin) to make the claim that collective memory is still epistemically relevant because it can contribute to a collective understanding of the past (and may do so even in cases where it is not aimed at truth). I then suggest that this notion of understanding can also be used to show that some forms of collective memory are less good than others, because they do not put us in the right sort of epistemic (i.e. understanding) relation to the past.

*'Poisoned' by Proust – Walter Benjamin on Remembering and Forgetting in À la recherche du temps perdu*  
Hyun Höchsmann (East China Normal University)

Ah ! que le monde est grand à la clarté des lampes ! Aux yeux du souvenir que le monde est petit! – Baudelaire, *Le Voyage*

Remembering and forgetting

Une mémoire sans défaillance n'est pas un très puissant excitateur à étudier les phénomènes de mémoire.

In *À la recherche du temps perdu* Proust writes that 'A memory without failure is not a very powerful exciter to study the phenomena of memory'. Proust's recognition of the value of the 'failure' of memory for the study of memory renders support for Walter Benjamin's interpretations of Proust's texts in 'The Image of Proust' and 'On Some Motifs in Baudelaire'. Swept along by Proust's 'Nile of language' which 'overflows and fructifies the regions of truth', Benjamin sets out 'to penetrate to the heart of Proust's world, to the universe of convolution'. In contrast to familiar reading of Proust's work as focusing on remembering, Benjamin (who once said that he was 'poisoned' by his toils on Proust), emphasises that Proust is equally concerned with forgetting.

It is because of the activity of remembering is accompanied by 'failure', we are stimulated to delve into the study of memory. Forgetting and remembering happen simultaneously. In deliberate acts of remembering, much is also forgotten: Benjamin observes that 'the tapestry of lived life' is reduced to 'but a few fringes'.

Mémoire involontaire and truth

Soudain les cloisons ébranlées de ma mémoire cédèrent.

Exclaiming, 'Suddenly the shaking partitions of my memory gave way', Proust describes the moment of involuntary memory. It is *mémoire involontaire*, a spontaneous remembering evoked by a catalyst – scent, sound, object, or image – which brings the forgotten past perception or experience into the present.

À propos the analysis of the contents of memory, Proust acknowledges the unverifiability of involuntary memory: 'Remembrance of things past is not necessarily the remembrance of things as they were ... There are innumerable little details which have not fallen into that potential reservoir of memory, and which will remain forever unverifiable'.

Emphasising 'the rejuvenating' force of involuntary memory, Benjamin understands the aim of memory in Proust's work to be a search for an 'elegiac' form of happiness which derives from 'the eternal restoration of the original, the first happiness'. Eternal restoration is possible as Benjamin conceives a remembered event as being infinite in implication:

For an experienced event is finite at any rate, confined to one sphere of experience; a remembered event is infinite, because it is only a key to everything that happened before it and after it.

The activity of involuntary memory is not a passive static reverie over a dormant past but a dynamic expansion of lived experiences. As Benjamin explains, 'Proust's method is actualisation, not reflection'. Benjamin describes Proust's writings as 'nets' cast into 'the sea of temps perdu' to discover anew:

Au fond de l'Inconnu pour trouver du nouveau ! – Baudelaire, *Le Voyage*

### Session 3A: Auto-noesis

#### *Episodic memory without auto-noetic consciousness*

Felipe De Brigard (Duke University)

Ever since Tulving's influential 1985 article "Memory and Consciousness" it has become traditional to think of auto-noetic consciousness as constitutive of episodic memory. As a result, it is often thought that the experience of episodic memory is necessarily auto-noetic. In this talk I argue that the relation between episodic memory and auto-noetic consciousness is not constitution, and that the association between the two is not necessary but contingent. To that end, I offer historical and conceptual evidence about the way in which the locution "episodic memory" was used prior to 1985, and suggest that not even Tulving thought of the connection between episodic memory and auto-noetic consciousness in constitutive terms. Finally, I argue that detaching auto-noetic consciousness from episodic memory is a good strategy for scientific research on memory, while it also invites us to ask why is it that we experience episodic memories the way we do given that it didn't have to be that way.

#### *On First-person Mnemicity Judgments*

Nuhu Osman Attah (University of Pittsburgh)

How one distinguishes episodic remembering from other mental states, particularly imagination, within a first-person perspective remains one of the central theoretical puzzles in the study of memory. Let us call this the problem of mnemicity, following Michaelian and Sutton (2017). The problem is constituted by two distinct issues: (1) by virtue of what (first-person marker) is memory distinguished from imagination and other mental states, and (2) how are memory errors such as confabulation possible? Both questions are still open (de Brigard, 2017; Michaelian and Sutton, 2017; Garry and Polaschek, 2000). They are also intimately linked in that it seems as though the answer to (1) will lead to the resolution of (2) – presumably (assuming constructivism), memory errors result from a breakdown or misfire of whatever mechanism allows for the distinction of memories from imagination. According to some philosophers (Teroni, 2017), first-person mnemicity distinctions are made groundlessly: there is simply a "brute inclination" (27) to make the distinction that one is remembering as opposed to imagining. According to others (see de Brigard, 2017 for an overview), this distinction is not "brute" but is grounded by, for instance, phenomenological features of memories such as "vivacity" which instances of imagination apparently either lack or possess to a lesser degree, or by epistemic or metacognitive features like those suggested by the source monitoring framework (Johnson, Hashtroudi, and Lindsay, 1993).

In this presentation, I will argue that first-person mnemicity judgments are not brute. It will, however, be my contention that there isn't a single criterion of mnemicity; a number of the different markers

of mnemicity that have been proposed could all turn out to be mutually sufficient for sustaining mnemicity judgments. I will base this contention on the argument that the psychological profile of episodic memory is so diffuse (more than has sometimes been admitted) (Casey, 1987) that it is hopeless to expect one account to characterize it completely and so no one account of mnemicity is likely to fully capture the grounds for judgments of mnemicity. I will then suggest that, while there might be different ways in which we arrive at judgments of mnemicity, some of these might be more typical as strategies for making the distinction than others. Among these, I will focus on one which has been unduly neglected but which seems to be one of the typical means by which we make judgments of mnemicity: we sometimes distinguish memories from imagination through an awareness of the degree of control we have over the contents of the mental state we are in.

#### *Episodicity and Auto-noetic Awareness Without (Meta-)Cognitive Phenomenology: Rethinking the Sense of Selfhood in Episodic Memory*

Shen Pan (University of Maryland)

Memory researchers overwhelmingly endorse Tulving's (1985) influential characterization of episodic memory that it involves auto-noetic awareness, a sense of the self in subjective time. Indeed, in recent years not only has auto-noetic awareness continued to be taken by many as a distinctive phenomenology of episodic remembering, it has also been suggested to ground the epistemic certainty (e.g., Klein, 2014) and epistemic generativity (e.g., Mahr and Csibra, 2018) of the episodic memory system. An immediate worry with these functional accounts of auto-noetic episodic memory is that they tend to, in one way or another, over-intellectualize episodic memory by, for example, requiring meta-cognitive or meta-representational capacities. A deeper but hitherto under-appreciated worry, however, is that, on these accounts, it is often unclear exactly what the relevant phenomenology auto-noetic awareness consists in, beyond an intuitive notion of "feeling of knowing". In this paper, I begin by clarifying the phenomenal character of auto-noetic episodic remembering. Specifically, I argue that the majority of extant phenomenal characterizations of auto-noetic awareness are either too weak (inadequate for a proper taxonomy of memory) or too strong (straightforwardly untenable unless irreducible cognitive phenomenology is assumed). I then develop, under standard representationalist assumptions about phenomenal consciousness, an alternative account on which auto-noetic awareness in episodic remembering is reductively explicable in terms of sensory representations surrounding the process of memory retrieval (crucially, not what is retrieved). Drawing on recent behavioral, cognitive neuroscientific, and psychopathological evidence, I further argue that auto-noetic awareness is not necessarily the "highest level of consciousness" (Wheeler, Stuss, and Tulving, 1997); indeed, it need not even involve meta-cognitive self-awareness explicitly, as it suffices to flexibly exploit reliable albeit fallible performance

signatures internal to the episodic memory system, such as retrieval fluency, specificity of the content retrieved. The alleged “sense” of self, then, arises only as a post hoc thought in creatures capable of self-awareness. Hence, when properly understood, auto-noetic awareness is a paradigmatic but non-essential phenomenological feature of episodic memory. A consequence of my account, consistent with recent empirical and theoretical work on field versus observer perspectives in episodic memory, is that auto-noetic awareness is causally—but not constitutively—implicated in episodic remembering. Moreover, my account is also well-positioned to explain how auto-noetic awareness should be an all-or-nothing affair while the rememberer’s sense of the self can vary in degrees, and while their identification of the self can remain invariant across perspectives. I conclude by considering the implications of my account for recent debates about episodic memory in nonhuman animals and young children.

### Session 3B: Memory and the self

#### *Identifying oneself in episodic memory*

Ying-Tung Lin (Institute of Philosophy of Mind and Cognition, National Yang-Ming University)

Every episodic memory entails a sense of self. There is a special way by which the subject, who is remembering, comes in contact with one’s self, which is embedded in the episodic simulation. We can directly and robustly identify ourselves in memory with an accompanying sense of identity. This paper aims to explore what constitutes such identification in memory. The issue may seem *prima facie* trivial. It is natural for us to be able to identify ourselves in memory, since the experience of our recollection structurally resembles our perception of the original event. However, given the phenomenon of observer-perspective memory, in which our visual perspective is decoupled from our embodied self, it becomes unclear whether we identify with the observing self or the embodied one. This phenomenon is important not only for illustrating the complexity of the issue but also for assessing the approaches to addressing the issue.

In this paper, I first show that the identification of oneself in memory with an observer perspective is intact. Then, the concern over self-identification is contrasted with that over how we identify objects in our memory. Can the issue of self-identification be reduced to one of object identification? Here, based on studies on observer-perspective memory, I argue for the negative answer. Finally, there can be three approaches to investigating the issue of self-identification: (1) appealing to the metacognitive mechanism and feelings, (2) endorsing a kind of self-referential view, and (3) treating remembering as a mental action. I will examine these approaches and propose a synthetic view which is able to account for the phenomenon of observer-perspective memory and respond to the irreducibility of self-identification.

#### *Temporal Perspectives in Perception, Memory, and the Self*

Gerardo Viera (University of Antwerp)

Various authors have noticed what seems to be a close connection between the self, memory, and an awareness of time (Locke, 1689; McCormack & Hoerl, 2001; Schechtman, 2011; Tulving, 1985). On the one hand, part of the explanandum for any account of the self is that we provide an account of (our sense of) ourselves as persisting individuals with complex temporal histories. On the other hand, some, notably Locke, have argued that our understanding of ourselves as persisting individuals is derived from our episodic memory – i.e. that memory and time will appear in the explanation of personal identity and the self. However, in recent years, empirical arguments have been raised that call into question the Lockean approach to personal identity. In particular, it has been argued that since individuals with severe deficits in episodic memory nevertheless retain a sense of the self, it

therefore cannot be the case that the sense of personal identity of self is derived from episodic memory (e.g. see (Craver, Kwan, Steindam, & Rosenbaum, 2014).

The aim of this paper is to show that despite the failure of the Lockean approach, there is nevertheless a close connection between the self, memory, and time according to which our (minimal) self is constituted by our spatio-temporal perspective in perception and how it situates ourselves as individuals within a temporally structured world. In particular, I will argue that perception provides us with a temporal perspective on a temporally extended world, and that this provides us with a foundational notion of a self that can then be augmented through by episodic memory and cognitive machinery to produce our more robust or sophisticated sense of personal identity. This account, I argue, retains an intimate connection between memory, the self, and time, yet can accommodate the existence of a sense of self in individuals with severe episodic deficits.

The paper goes as follows: In section 1, I lay out the Lockean approach to personal identity and the challenge that is raised by considering individuals with deficits in episodic memory that retain a sense of self. In section 2, using developments in neuroscience, psychology, and philosophy, I describe the fragmentary model of temporal perception according to which our temporal perspective on the world in perception is constructed by integrating the informational contents of a wide variety of highly specialized timekeeping mechanisms. In this section, I will argue that in much the way that perception provides us with a spatial perspective on the world, it also provides us with a temporal perspective, and that this spatio-temporal perspective constitutes a minimal self, i.e. a unified subject of experience that persists within a temporally structured world. In section 3, I argue that this minimal notion of a self can be scaffolded by the resources provided by episodic memory and causal reasoning to construct the more robust notion of personal identity and the self that is found in narrative understandings of ourselves as individuals with moral, social, and epistemic obligations.

*Russell and Ryle: Monism, Memory, and Retrospection*

Iva Apostolova (Dominican University College)

Robert Davies (University of York)

This is an exploratory project into Bertrand Russell and Gilbert Ryle's philosophies of mind. More specifically, it compares Russell's views on introspection and memory with Ryle's views on Retrospection. This comparison is inspired by a two-pronged thesis: on the one hand, there are common and non-trivial philosophical roots between the two that are worth investigation; on the other hand, a continuity of ideas in their respective philosophies of mind, especially with regards to the move toward replacing introspection with a form of memory (present either explicitly or implicitly in both philosophers). Russell had always

been 'suspicious' of the status of introspection as a cognitive faculty. Even during his acquaintance period, operating under a dualistic epistemological framework, Russell struggled with the status of the subject of cognition, knowable through introspection. This uncertainty of the cognitive status of the subject culminated in Russell pronouncing, in 1914, the reduction of the subject to a mere logical fiction. With this, the function of the cognitive faculty of introspection becomes even more obscured and unclear. In 1921 Russell announces the completion of the shift to neutral monism (James's version was the one he felt the most at ease with) which complicates further (although with the intention of actually simplifying) the status of the cognitive subject and the role of introspection in the cognitive process. One of the things that stands out in the course of the slow transition to neutral monism is that Russell sees the role of memory, understood as recollection of past events, as increasingly prominent. In following Russell's development in the neutral monist period and the increasing importance of the faculty of memory, we will turn to Ryle's views which reinforces some of the conclusions that Russell reached. Ryle (1949) thought that most of the work of introspection could be done by the genuine capacity of Retrospection. He concluded that there was no difference in kind between knowledge of one's own mind and knowledge of the minds of others. Ryle's treatment of Retrospection leaves a number of questions unanswered. In the second part of this project we examine how Retrospection might be seen to fit into Ryle's overall taxonomy of memory, whether it is a (necessarily) autobiographical capacity, and whether the process of retrospection is inferential or non-inferential. These matters are crucial in deciding the extent to which retrospection can carry the load of introspection, and the extent to which Ryle was correct in concluding that there is no difference in kind between self- and other-knowledge. We conclude that a preoccupation with denouncing Cartesianism may have prevented Ryle from an alternative, and arguably richer, conclusion: that the supposed asymmetries between self-knowledge and knowledge of other minds do not need to be rejected, but instead can be explained by an appropriate view of memory, something to which, we think, Russell would have been sympathetic.

### Session 3C: Memory systems and kinds of memory

*What Counts as a Memory?*

David Colaço (University of Pittsburgh)

Several memory researchers have introduced what I call broad definitions of memory, such as the idea that “memory can be defined as experience-dependent modification of internal structure, in a stimulus-specific manner that alters the way the system will respond to stimuli in the future as a function of its past” (Baluska & Levin 2016). Others drop stimulus-specificity from its definition. These definitions lack any reference to a rich sense of representation, mind, or phenomenology. As a result, they extend to everything from episodic memory to reflex sensitization, the latter of which many consider a fringe form of memory (or not memory at all). Although there are no agreed-upon criteria for what counts as a memory – there is, of course, disagreement over whether there even are unified criteria for memory – many nonetheless find these definitions to be too broad. This leaves us with two questions. What counts as a memory? And what about the theory and practice of memory research depends on answering this question?

To answer these questions, I first clarify the nature of this debate. Rather than being merely rhetorical, this dispute, at its core, is about projectability. Therefore, it is tied to the idea that we want to count things as memory insofar as we can make useful inductive generalizations about the varieties of memory, or extrapolate claims about one variety of memory to another. Skeptics of the broad definitions reject that idea that these definitions support the right kind of projectable claims about simplistic varieties of “memory” to its more paradigmatic varieties in humans: there are simply too many relevant differences between (say) episodic memory and sensitization to count them as anything but superficially similar. By contrast, those who endorse one of these broad definitions focus on the practical reasons for permissively defining “memory.” I argue that the researchers who endorse these broad definitions do not assume that useful projectable claims about memory can be made. Rather, they aim to determine what claims can be projected, and whether these claims are valuable to science. For this reason, they endorse a broad definition as a working hypothesis.

Focusing on cases where memory scientists who endorse these broad definitions have attempted to revive the studies from the infamous investigation of “memory transfer”, I investigate both the benefits and detriments of endorsing a broad definition as a working hypothesis. Because this definition greatly extends what counts as a memory, endorsing it provides an avenue to properly investigate what kinds of claims about memory – specifically, inductive and extrapolative claims regarding the function and explanation of memory – can be made when its definition is broadened. This position does not neglect the well-established differences between various phenomena called “memory”; rather, it establishes a means by which similarities and differences be-

tween these phenomena can be adjudicated in service of the advancement of memory research.

*Systems of Memory and the Self*

Thomas Ames (University of Missouri-St. Louis)

A pluralistic account of the Self typically suggests the existence of several simultaneously available mental states; that is, the Self, used as a plurality, “are the experiences and mental states we have and that’s it: no additional substances, and no bundles” (Benovsky 2014). I will show, however, that there are not only several modes of the Self that are indeed normatively bundled, namely a neurological Self and a narrative Self, but that in addition these modes correlate to two specific systems of memory: semantic and episodic, respectively. I then go on to discuss evidence of these correlations informed by amnesia and other clinical case studies. The upshot of this proposal is a better understanding of the relationship between the Self and memory.

*Different Memory Systems are Not Different Memory Kinds*

Jonathan Najenson (The Hebrew University of Jerusalem)

The myriad ways in which experience changes behavior do not seem to fit in a unified theoretical framework. Different types of memory are localized to different brain regions, possess different background conditions and exhibit different learning curves, thereby constituting different memory systems. Several philosophers have argued that the idea of different memory systems should result in rejecting memory as a unified phenomenon. This disunity has led to claims that a general theory is untenable as memory is not a natural kind. A major focus of such objections involves the claim that a big part of the phenomena considered as memory should not be characterized as involving information-processing at all. The separation between the cognitive and behavioral manifestations of memory has received various names, such as declarative/procedural, voluntary/involuntary, intentional/incidental and many others. This schism has taken to reflect the two modes in which the products of memory are expressed. This has been reflected in the central distinction between memory systems, dividing memory to explicit and implicit systems. Based on this distinction, Michaelian (2010) argued that while information storage has no explanatory role to play in describing the activity of the non-declarative memory system, it is indispensable for describing semantic and episodic memory. Referring to stored information and how it is made available to an organism is required in order to understand behavioral modifications involving explicit systems but is not needed to explain the workings of implicit memory systems. As there is no adequate computational description that applies to both systems, Michaelian claims, memory is not a natural kind. Michaelian thus offers to divide the taxonomy along cognitive lines. Types of memory that involve representations

underlie a cognitive memory system, whereas phenomena characterized as non-declarative memory are not involved in information-processing and may underlie a non-cognitive memory kind. I argue that different memory systems do not entail different memory kinds. Positing stored information is required to describe phenomena associated with non-declarative systems as seen by the use of internal model models in the explanation of motor control. Moreover, in the context of memory systems, representation and behavioral flexibility are separated. Semantic priming, an automatic alteration in response due to previous exposure to a related semantic stimuli, must involve representations but this information is not available to an organism in any similar way to how it is available in declarative memory. Finally, all memory phenomena can be described as a process of encoding, storage and retrieval which involve similar neural mechanisms. Difference among these stages involves the networks in which such mechanisms are embedded and the complexity of information processing. Different memory systems do not express distinctive natural kinds but a different degree of behavioral flexibility.

#### Session 4A: Episodic memory/memory traces

*On episodic memory being a certain kind of experiential imagining: A comparison between Hopkin's Inclusion View and Michaelian's Simulation theory*

Andrea Rivadulla Duró (University of Barcelona)

Recent views in philosophy have argued that episodic memory is an instance of experiential imagining. My aim here is to evaluate two of these theories – viz., Michaelian's Simulation theory, 2016a & 2016b; Hopkins's Inclusion View, 2018 – in terms of the resources they can employ in order to account for a certain phenomenological asymmetry between episodic remembering and (other?) experiential imaginings without undermining their claim that they are both imaginative episodes.

The phenomenological difference I will focus on is the following. In episodic memories, at least when recognized, contents are usually presented to us not as merely possible but rather as having been this way, thereby indicating that the so represented contents were in fact witnessed by us -that we “experienced” them. This sort of phenomenology seems to guide other beliefs: If I try to remember if John was at the party yesterday and an image of him smiling on one corner of the table comes to my mind accompanied with the sort of phenomenology I have mentioned, then I'll come to the belief that he was indeed at the party. This is something that does not happen, for instance, if I try to imagine John smiling at me in the zoo at some point in the future (an imagining of a future event, that is): an episodic imagining which would not have any authority over my beliefs. This phenomenological feature has been characterized in different ways (Russell's (1921) feeling of familiarity; Martin's (2001) and Hoerl's (2001) phenomenology of particularity, Klein's phenomenology of pastness (2015), among others) and the question remains unsettled (Byrne, 2010; Teroni, 2017; De Brigard, 2017).

The plan for this talk is as follows. First, I will motivate the existence of the phenomenological asymmetry following the work of Hopkins and Michaelian, in which I think is slightly underestimated. Secondly, I will describe some of the candidates for being the phenomenological mark of episodic remembering in order to see whether any of these are compatible with Hopkin's or Michaelian's views. I will conclude that in the case of Hopkins's Inclusive View, the most plausible way of accounting for this phenomenology is by taking it to be the upshot of stored beliefs, and this results in recognized episodic remembering being too dependent on declarative memory. In Michaelian's case, I regard the recognition of a certain type of intentionality (as suggested by Urmson, 1967) to be the main candidate to play the requisite phenomenological role, although this option is also problematic. I will finish by exposing the reasons why further work needs to be done in order to conciliate the alleged phenomenology of episodic remembering with views that take this kind of memory as a form of experiential

imagining.

*Two Hybrid Approaches to The Content of Episodic Memory and Their Limitations*

Bada Kim (University of Kansas)

Two concepts, episode and experience, provide the lens through which distinct accounts of the content of episodic memory is often understood. However, two interesting hybrid accounts of episodic memory content have been proposed: Rowland's Fregean-model of episodic memory content (Rowlands, 2018) and Fernández's self-referential view of episodic memory content (Fernández, 2017). These two hybrid accounts succeed in handling the problems that episode-based approaches or experience-based approaches encounter. In this paper, I examine the two hybrid approaches of episodic memory content above and, argue that the two views fail to satisfy an important constraint that any adequate account of episodic memory content should satisfy. Insofar as the two hybrid approaches aim to provide an adequate account of episodic memory content, the two views should build in a theoretical device for making a distinction between episodic memory and similar mental activities, e.g. confabulation. I will show that the two hybrid approaches fail to draw a line between episodic memory and confabulation in their accounts. In particular, I examine how the two hybrid views predict the lost-in-mall case (Robins, 2016; Loftus & Pickrell, 1995) and whether their predictions would be plausible. It quickly becomes clear that the Fregean-model blurs the line between episodic memory and confabulation due to the suspicious role of the self in the model. Furthermore, the self-referential view eliminates the possibility of confabulation itself in their account of episodic memory content and this result is counterintuitive. Therefore, the two hybrid views should be modified or fleshed out potential theoretical machinery in their accounts.

*On the dynamic nature of memory trace: the role of synaptic tagging, consolidation, and reconsolidation processes.*

Fabício Dutra (Universidade Federal de Santa Maria)

Memory errors have aroused the interest of philosophers and scientists for centuries, and are now thought to have an important evolutionary role. In humans, it is common to divide memory errors into two categories: omission errors (forgetting) and commission errors (false memories). In both categories, the subject tries to remember, but is not able to access adequately target information or experience. Many contemporary philosophers relate forgetting process to a disrupting in memory consolidation. Many also explain false memories in terms of engram absence, corroborating constructivism. Researches using new technologies, such as optogenetics, have challenged this way of understanding memory errors and allowed philosophers of memory to

reinterpret such theories. An study from Tonegawa's Lab (Ryan et al. 2015), showed that memory consolidation inhibition leads to forgetting. However, artificial engram reactivation, within a certain time window, results in memory reinstatement. In this way, is it a single neural mechanism that supports memory trace? Memory traces or engrams can be some brain modifications, resulting from experience, which enable information, ideas and experiences retention; they are changes in synaptic connections strength between neurons. In neuroscientific and philosophical discussions, memory trace is presented as having an intimate relation with synaptic consolidation process. This process involves different molecular alterations and the mobilization of all this neural machinery is expensive and slow, demanding a few hours until its effectiveness. In the moments after experience, while consolidation has not yet been performed, however, the subjects are already able to retrieve it. So, we can deduce that memory trace does not depend exclusively on the consolidation processes, as widely accepted. In the initial stages after experience, the increase in synaptic response is not due to new protein synthesis, but to other mechanisms. This process is guided by synaptic tagging, a signaling that occurs specifically at synapses directly involved in target experience. In this way, we can speculate that the nature of memory trace is dynamic, and that the trace is grounded, initially, on synaptic tagging processes, and later, on stabilized neural networks. In the mentioned study, even that neural circuit has not been consolidated, the synapses remained tagged for a certain time window, making possible memory reinstatement, after artificial reactivation. In other work (Ramirez et al. 2013), the same group used a false memories model, in which transgenic mice were exposed to a context and, after engram stabilization, it was artificially reactivated with light, and new elements were inserted into original experience representation. Robins (2018) suggests that such findings support an ephory dissociated from engraphy, that is, they demonstrate that the retrieval process and the engram may not be completely entangled. We have, however, an information updating process, from the neural circuits reorganization, by a memory reconsolidation process. Reconsolidation involves already consolidated engrams destabilization, beginning with its activation, reorganization and subsequent re-stabilization, via de novo protein synthesis. Thus, it seems plausible to think that the nature of memory trace is dynamic since its genesis, with synaptic tagging, until its maintenance and modification, with synaptic consolidation and reconsolidation.

## Session 4B: Memory and personal identity

*Memory-based accounts of Personal identity can avoid circularity objection?*

Susie Kowalczyk (Universidade Federal de Santa Maria)

At the center of philosophical investigations concerning the problem of personal identity is the search for the answer of which criteria are required for the self to be endowed with simplicity in a moment and identity all along successive moments. In other words, the aim is to know what it is that makes a person S, at the present time t1, to be one and the same S in the future time t2, or to be one and the same S in the past time t0. What is at issue in the first case is what would guarantee the synchronous unity of the self, that is, what could reunite self's different perceptions as its perceptions at a given moment, and in the second case, the diachronic character of the self, that is, what is necessary for a person S to preserve her identity retrospectively until the point where she can extend, through memory, her own consciousness through the past. Contemporary approaches of the problem of personal identity acquired its initial contours in John Locke's (1694) theory, which, by detaching personal identity from the permanence of a substance, privileged a psychological criterion and its moral implications. For Locke, personal identity requires the continuity of consciousness, in a way that what characterizes a person, as well as what makes her be the same over time, relates to what constitutes her as an individual to whom it can be attributed responsibility for her own acts and judgments. The criterion of psychological continuity proposed by Locke to support personal identity made him to be interpreted as proposing a theory of personal identity based on memory. There are two main objections to Locke's theory thus interpreted, made famous in the writings of Thomas Reid (1785). Considering, generally speaking, that the first objection, anticipated by George Berkeley (1732), is that Locke would violate the transitivity of identity principle, according to whom if a is identical to b, and b is identical to c, then a is identical to c, Let us focus on the second objection. This, anticipated by Joseph Butler (1736), is Reid's objection to Locke according to what he takes as a guarantee of personal identity what is, rather, evidence of personal identity. My aim is to investigate whether memory can prescind personal identity in order to test the feasibility of rehabbing memory-based personal identity theories against circularity objection. In order to this, I will evaluate whether contemporary philosophical theories of memory such as Michaelian's (2016) simulationist account, Bernecker's (2017) causal account and Robins (2016) hybrid accounts, can support the relation between a present item to consciousness, which is a candidate to count as a genuine memory and an item once present to the consciousness and which is supposed to be being rescued as memory through a bond that is, in turn, independent of personal identity. If so, it is possible that personal identity finds in memory its criterion, without incurring in circularity.

*Personal identity and memory: arguments against the circularity objection*

Loraine Gérardin-Laverge (University of Paris Nanterre / University of Antwerp)

In The Essay, II, XXVIII1, Locke (1694) asks two kinds of questions about personal identity. One is an epistemic question (how can a person identify herself as the same person in different times and places?) and another one is a metaphysical question (what are the conditions of personal identity?). According to him though, they are inseparable, and nonetheless prioritized. The answer about the conditions of personal identity depends on an answer about the means of self-access. As a psychological theory of personal identity, Locke's theory got attacked (Leibniz, 1765; Butler, 1736; Reid, 1785; Flew, 1951), defended and interpreted (Hamou, 2014; Winkler, 1991; Weinberg, 2012), adapted (Parfit, 1986; Perry, 2008), and met difficulties facing empirical cases (Craver, 2012). He opened a path in the reflection on personal identity though: the specificity of the person lays on the constitutive epistemic relation she has with herself. My main aim is to define this constitutive epistemic relation, to show its benefits to overcome the theoretical difficulties addressed in particular by Butler, and for our understanding of empirical cases (in particular episodic amnesia). I start (1) with a reconstruction of Locke's personal identity account and show, with textual evidence, that he connects the person to the means of its own recognition (consciousness and memory), operating a leap from an epistemic answer to an ontological answer to the question of personal identity. I point out (2) that it is the very reason why he got the circularity objection, first addressed to him by Butler, and exemplified by empirical cases in Craver, 2012. I propose (3) a reading of Locke which consists in the reading of the idea of personal identity as an idea of relation. I suggest that Locke has opened a path in the reflection on personal identity by focusing on the epistemic relation one has with herself, as the key feature of personal identity and as the producer of this personal identity. I contend that this constitutive epistemic relation is not subject to the circularity objection and I try to show how. So, the first answer to the circularity objection is a Lockean one, supported by textual evidence. (4) The latter strategy moves away from Locke's text but still focuses on this constitutive epistemic relation, by studying remembering as one of its (diachronic) privileged means. From an account of episodic memory consistent with recent empirical findings, I suggest that memory is not merely a reproductive capacity (as Butler ought it to be) but also has a constructive dimension. Consequently, I suggest that memory plays two complementary roles in the relation one has with herself: episodic memory allows self-recognition by the construction of a representation of one's own self. Since personal identity appears as a result of a self-productive epistemic relation, I argue (5) that the circularity objection falls. I eventually contend that the definition of personal identity by the constitutive epistemic relation one has with her or him self has benefits in particular in order to

understand empirical cases.

*Personal Identity and Three Ways of Failing to Own a Memory*  
Katarina Perovic (University of Iowa)

In philosophical debate on personal identity, proponents of the memory criterion have always had to reckon with some version of the notorious circularity objection. As Butler and Reid objected to Locke, memories cannot be constitutive of personal identity if the very concept of memory presupposes that the person is remembering one's own past experiences. When Shoemaker introduced the concept of quasi-memory (q-memory) as a way of avoiding the circularity objection, it came as a much needed relief for proponents of the psychological criterion. A q-memory is thought of as a veridical memory devoid of the troubling tacit assumption of the ownership of the remembered experience. Thus, according to Shoemaker and Parfit, one has a q-memory of a past experience if: 1) one has an apparent memory of a past experience; 2) someone did have that experience; and 3) the apparent memory is causally dependent, in the right kind of way, on that past experience. Condition 3) is meant to ensure that q-memories are veridical and not merely illusions, while condition 2) is doing the important work of driving the wedge between the person doing the remembering and the person having the experience. With q-memories at hand, proponents of the memory criterion seemed to now be able to formulate a non-circular criterion of personal identity, one that appeals to continuity of q-memories, q-beliefs, q-desires, etc.

I will argue, however, that q-memories, as they were originally conceived, are in need of further clarification, as there seem to be at least three ways in which one might fail to own a memory. This is made clearer when we consider the following statement: "I have a memory of my experience of singing in a band and this experience comes to me as having been had from my first-person perspective." Let's call the original, Shoemaker's understanding of q-memory, qE-memory, where "E" stands for "experience". QE-memory would thus get rid of the sense of ownership expressed in the second underlined part of the statement. I might have a veridical qE-memory if I have a memory of someone else's experience of singing in a band. But what about the "my first-person perspective" part of the statement?

There seem to be at least two ways for a person to be lacking one's own first-person perspective: i) one might come to feel that the experience is, in a sense, felt impersonally (from a third-person perspective), or ii) one might feel that the experience comes from someone else's first-person perspective. Case i) is supported by Klein and Nichols's recent description of a patient R.B., who after an accident, for a period of time reported that his memories came to him as if from a third-person perspective. Case ii) is supported by Parfit's argument in favor of the possibility of having qE-memories from other people's first person perspectives. Indeed, Parfit insisted that there was nothing implausible

about the idea of my coming to own (via memory-copying mechanism of some sort) a veridical quasi-memory from, say, my husband David's first-person perspective. I could thus come to have a qE-memory of singing in a band, from David's perspective – i.e. with a band behind me, holding a guitar and playing a song, and a male voice coming out of my (!) mouth.

I will develop further these different senses of failing to own a memory and argue that they rely on fundamentally distinct assumptions about what constitutes our sense of self.

#### Session 4C: Ethical issues

*Plurality of Memories: Moral implications of taking into account different voices about the past*

Rosa Belvedresi (CONICET – IDIHCS, Universidad Nacional de La Plata)

Marina Trakas (CONICET – IDIHCS, Universidad Nacional de La Plata)

It is common to think that for faithfully representing our shared past, we have a responsibility—an epistemic responsibility—as rememberers: to be as accurate as possible, and to be sincere with ourselves in order to avoid self-deception. Nonetheless, memories cannot be reduced to simple facts because our memories always present the alleged facts from our particular perspective. This particular perspective refers to the affective, evaluative and ideological elements that sometimes we share with others and that shape our memories. Furthermore, the act of remembering not only involves a private and individual aspect but also a public aspect, especially when the events remembered are socially significant. As Ricoeur (2000) has pointed out, the epistemic dimension of memory is blended with its pragmatic dimension, which is related to the exercise of memory or the “duty of memory”. It seems thus that, as rememberers, our epistemic responsibility is intertwined with a moral one. This means that to be faithful to the past we need to consider—and even include—the perspective of the others who also experienced the event that is at stake (Campbell, 2014). This moral demand seems in principle desirable and reasonable when the perspective to be taken into consideration refers to the victims of oppressive and traumatic events who demand recognition. But on one hand, there are multiple victims and therefore multiple perspectives. And on the other hand, there could be other voices that express different points of view and that also expect to be heard. Among these different voices, the perpetrators’ perspective poses an important moral dilemma: should it be considered and included as part of the memory of the event? Does this inclusion imply in certain way justifying their acts? (La Capra, 2004). In this article, we analyse this plurality of perspectives—that we consider to be inevitable—and the challenges they present for the construction of a faithful memory of our shared past. In spite of that, we hope to prove that not all the perspectives can be equally considered because different rememberers experienced that common event in the context of unequal power relations. This original inequality is perpetuated in the current ways in which the event is remembered. Hence, the importance of the greater consideration of the points of view of those who have experienced that event as victims. In these cases, the perspective of the perpetrator may be included by virtue of the factual content that it may provide but should be rejected in relation to the value assumptions it expresses. In conclusion, social memory is far from being a unitary phenomenon; nonetheless, this plurality necessarily entails ethically grounded choices.

#### *Amnesia and the Justification of Punishment*

Austen McDougal (Stanford University)

Should someone who commits a crime be treated any differently if she lacks episodic memory of it? I consider several possible approaches to this question. Set aside the epistemic issue that memory provides unique access to details that may mitigate culpability, which is important but irrelevant to our discussion, and stipulate that the offender was fully culpable at the time of her crime. Are the usual goods of punishment still available? From a utilitarian perspective, the analysis of the situation is mixed: satisfaction for the victims, incapacitation, and deterrence continue to count in favor of full punishment, while its rehabilitative and restorative roles become more complicated. At least on a first pass, the utilitarian analysis fails to adequately explain our uneasiness about punishing the amnesiac.

A retributive approach seems more promising. For instance, Christopher Birch has argued that the punishment is justified by the possibility of bringing about the offender’s repentance by way of suffering, which explains why we lack the same reason to punish the amnesiac on the assumption that repentance is precluded by memory loss. This view struggles to explain why punishment remains justified, however, in the cases of other kinds of offenders who also seem to lack the ability to repent, such as psychopaths. I consider some other versions of teleological retributivism—aiming alternatively at guilt and remorse—which also suffer from the same flaw; more plausible in this respect is a version that aims at a rich, first-personal attitude closer to something like regret.

A separate issue concerns the license of the state to punish, which depends on the moral desert of the offender independent of which goods are available. I propose the following Principle of Monotonicity in Moral Desert: one’s moral desert for a particular action never increases. Now, some cases of memory loss are due to temporary problems with memory retrieval that later go away, so moral desert cannot be tied to memory loss in such cases on pain of violating this principle. Supposing that there is no morally relevant difference between such cases and other cases where the memory is either permanently lost or never properly stored to begin with, moral desert cannot be tied to memory loss, period.

Finally, we should distinguish a third question that I find most probative: irrespective of the goods of punishment and moral desert, is there any special cost to punishing amnesiacs? There does seem to be some moral cost to one’s suffering whenever she cannot adequately understand why it is happening. Consider by analogy our unease about making a child undergo a painful medical procedure when she is too young to understand the reasons for it. Similarly, even if the amnesiac understands the reasons for her punishment on an abstract level, she lacks access to her past mental states that would explain how she has ended up in her position. Thus, the state would be bringing about additional anguish over and above the punishment ordinarily suited

for the crime.

*Meta-Memory and the Meta-Ethical Principle: 'Ought' Implies 'Can'*  
Harjeet Parmar (State University of New York at Buffalo)

In the literature on the principle 'ought' implies 'can' the range of examples, used to both endorse the principle and also to protest against it, rely heavily on the human agent's physical and quasi-psychological limitations. In particular, the abilities associated with the use of 'can' in the satisfaction of obligation-giving oughts focus primarily on the physical limitations of the agent: an unaided agent is not able to move faster than a speeding bullet, is not more powerful than a locomotive, is not able to leap tall buildings in a single bound. Not even close. Furthermore, other recognized limitations include what I label 'quasi-psychological' limitations: the performance of some physical acts are obscene, and thereby prevent the agent from acting: an agent may not be able to reach into a sewage tank to retrieve a borrowed brand new iPhone 6, or eat a bowl of squirming slugs to save innocent lives, or most other things deemed icky. However, what gets left out of the mix are genuine cases of psychological limitations: the boundaries that circumscribe the exercise of an agent's deliberative and action-guiding processes. These limitations are the human agent's finitary predicament: they represent the bounds on the agent's cognitive resources: time, space, attentional focus, cognitive horsepower, and most importantly, for this talk, their memorial abilities.

To my knowledge, the literature on the principle is strangely silent on the role that psychological limitations play in any critical discussion of the principle. In this talk, I will make a case that any such critical discussion is incomplete, unless it provides weight to the agent's psychological limitations. Leaving aside straight-forward examples of forgetfulness, carelessness, or "choking", I will focus on those psychological features on which the agent has little to no control: meta-memory, or otherwise, meta-cognitive failures. To bolster the philosophical case, I will show how Peter Vranas' "hard-line" defense of the principle terminates in odd consequences for his view, consequences that he himself would find unacceptable, for the lack of taking into consideration the agent's psychology. In particular, I will demonstrate how a form of meta-memory failure 'blocking', a more general form of 'tip of the tongue' phenomenon, serves to undermine Vranas' defense of the principle. I focus on Peter Vranas' "I Ought, Therefore I Can" because he takes himself to be providing the most "systematic and comprehensive" defense of the principle to date.

Ultimately, I take no position on the truth of the principle, only that were it to apply, the oughts genuinely attributable to human agents should be restricted both by their physical and quasi-psychological, and psychological makeup. Furthermore, by raising the awareness of the role that the agent's psychological limitation plays in a critical discussion of the principle, I also hope to provide a more accurate and robust

circumscription of the abilities that can be read off of the 'can' in the principle.

## Session 5A: Episodic memory

### *Is Episodic Continuism Adaptive?*

Sarah Robins (University of Kansas)

Philosophers and memory scientists have been debating the relationship between memory and imagination. The debate is now cast as one between continuists and discontinuists (Perrin & Michaelian, 2017), where the former argue for a closer relation between memory and imagination than has generally been supposed by the more traditional discontinuist picture. Debate continues, but there is an emerging consensus around continuism, which portrays mental time travel, both forward and backward, in terms of imaginative simulation.

Arguments for continuism often involve the claim that episodic simulation is adaptive, and further, that it is more adaptive than a distinct episodic memory system as proposed by discontinuism. In this paper, I evaluate these claims and argue that they are not well supported.

First, I consider the claim that discontinuism is maladaptive. The claim that memory's function is to preserve information from the past looks to be under threat from evidence of the pervasiveness and persistence of memory errors. Many have worried that the extent of memory errors would force us to conclude that memory is a system that frequently malfunctions—and have preferred instead to advocate for an alternative (continuist) conception of memory's function. But research on the adaptiveness of functions challenges this inference. As Millikan (1984) and others have noted, a function can be adaptive even if it only rarely succeeds. A frog, for example, may strike at every black dot it sees, when only very few of these dots are edible flies. This functional response rarely yields success, but is nonetheless adaptive (for more on this point, see forthcoming work from Arieh Schwartz).

Next, I consider the arguments given in favor of continuism's adaptiveness. Schacter and colleagues (Schacter & Addis, 2007; Schacter, Benoit, & Szpunar, 2017) have long argued that the flexible recombination of information that episodic simulation affords is adaptive. The ability to think about future events and selectively put to use bits of information from various past experiences looks to be cognitively significant for prospective thinking and future planning, as well as emotional regulation, affective forecasting, and psychological well-being (e.g., MacLeod, 2016; Jing, Madore, & Schacter, 2016).

First, the connections between episodic simulation and other positive cognitive traits and abilities is interesting, but stops far short of an argument for adaptiveness. The claim that a particular trait is adaptive requires demonstration of its influence on fitness—i.e., increasing the likelihood of survival and/or reproduction. Arguments for episodic simulation are not given in these terms, nor is any argument given for the adaptivity of these other psychological traits to which it is related. Second, if we pause to consider how flexible recombination could confer a fitness advantage on an organism, then it becomes clear that any survival benefit derived from this ability relies on the organism's abil-

ity to keep track of what actually occurred on the past so as to create plausible and useful simulations. So, in order to be adaptive, flexible recombination would require episodic memory to remain distinct from imagination and simulation—an argument in favor of Discontinuism.

### *Is Episodic Memory for Mental Time Travel?*

Arieh Schwartz (University of California, Davis)

This presentation focuses on the now popular view that the function of episodic memory (EM) is to simulate future experiences, in order to improve planning and decision-making. The relevant form of simulation goes by a number of different names in the literature, including Mental Time Travel (Tulving, 1993; Suddendorf and Corballis, 1997, 2007; Boyer, 2009; Klein, 2013; Michaelian, 2016; Hoerl and McCormack, 2016), Constructive Episodic Simulation (Schacter and Addis, 2007; Shanton and Goldman, 2010), and Episodic Counterfactual Thought (De Brigard, 2013). In this presentation, I discuss two related types of problems faced by the view: problems stemming from a lack of clarity regarding “function,” and problems stemming from a lack of clarity regarding episodic memory. We need to know what function and episodic memory are before we can answer the question “What is the function of episodic memory?”

“Function” means different things in different forms of scientific explanation. I draw on the function debate in the philosophy of science to distinguish several importantly different ways to interpret the Mental Time Travel view: as a view about episodic memory's phylogeny (Wright, 1967; Millikan, 1984; Neander, 1991), as a view about stabilizing selection on the character in recent evolutionary history (Godfrey-Smith, 1994), as a view about its current survival-value (Bigelow and Pargetter, 1987), or as a non-evolutionary view about the its causal role or mechanism (Cummins, 1975; Craver, 2001). This discussion is used to motivate three points. First, the Mental Time Travel view should not float free of these distinctions, because these different types of functional ascription require different types of evidential support. Second, EM may perform different functions given different conceptions of function, or even given the same conception of function. (Therefore, the Mental Time Travel approach may be consistent with the view that EM is for remembering.) Third, if the Mental Time Travel view is meant to ascribe an etiological function, then current false memory research doesn't rule-out that EM is for remembering, because adaptations may achieve their historically selected effects poorly and/or rarely (Gould, 1981; Millikan 1984).

The second type of problem I discuss arises due to the lack of a secure conception of what episodic memory is. I argue that this lack is especially problematic if the Mental Time Travel view ascribes an evolutionary function. For example, if EM is memory that codes information about What Where and When an episode occurred (Tulving, 1983), then it is likely shared by non-human animals, and arose earlier

in evolutionary time than the Pleistocene. This matters for the sort of adaptive problem it was likely selected to solve. Whereas, if EM is memory characterized by autooetic consciousness (Tulving, 1985), then it likely arose later, is likely not shared by non-human animals, and it likely arose in response to a different sort of adaptive problem. Because there is intense controversy over what EM is, it is difficult to begin addressing the question of what EM is for.

*Beyond Singularism: Episodic Memory, Traces and General Event Representations*

Nikola Andonovski (Johns Hopkins University)

According to the classical causal theory of memory (CCTM), episodic remembering is characterized by the existence of an appropriate causal connection between a subject's present mental state (i.e. the apparent memory) and her original experience of the remembered event (Martin & Deutscher 1966). The appropriateness of the causal connection is secured by the existence of a memory trace, a stored mental representation that exists continuously in the interval between the original experience and the act of remembering. Traces are distinct states with unique causal histories, representing events in virtue of being structurally isomorphic to them. Consequently, they play a double role in the theory: (1) they anchor a criterion of mnemonicity, distinguishing memories from non-mnemonic mental states, and (2) they afford the individuation of memories in terms of their unique causal histories. CCTM, then, endorses a form of representational singularism: features of memory representations account for the metaphysical singularity of remembered events.

This form of representational singularism has recently been challenged by a number of theorists (De Brigard 2014, Robins 2016, Michaelian & Robins 2018). The key development underlying this challenge is the endorsement of connectionist models of representation by contemporary memory science. On the connectionist view, memory traces are distributed, stored as patterns of connections between sets of processing units in neural networks. In such memory systems, multiple traces typically share representational resources, being superposed in the same set of units and connections. This superposition is in tension with CCTM's representational singularism. Since distributed memory traces don't have unique causal histories, they cannot play the roles specified by the theory. They can neither anchor a criterion of mnemonicity nor support the individuation of memories. Causal theorists have responded to this challenge in a number of ways. In a representative recent response, Perrin (2018) argues that CCTM's requirement of representational singularism is too strong. According to Perrin, episodic memory represents events as metaphysically singular – i.e. as possessing distinct spatiotemporal coordinates – yet there is no feature of memory representations that can secure the assignment of such coordinates to particular events. Causal theorists, on his view, should accept

a version of 'presuppositional' singularism: while the metaphysical singularity of remembered events is presupposed, memory traces cannot account for such singularity.

In this paper, I argue that even this weaker form of singularism should be rejected. To establish that, I look at the under-appreciated wealth of evidence concerning general event representations in autobiographical memory. In both free recall and cued recall paradigms, 30-70% of elicited memories represent 'events' that don't have distinct spatio-temporal coordinates (Barsalou 1988, Williams 1996, Rubin et al. 2003). Here, I pay particular attention to the variety of general memory representations grouped under the rubric of "personal semantics" (Renoult et al. 2012, 2016). I argue that the prevalence of such representations, combined with the overwhelming evidence for the constructive character of memory, provides decisive reasons for moving beyond singularism in theories of memory. Construction of flexible representations of relevant event types is as important a function of episodic memory as is the representation of metaphysically singular events. Appreciation of this point will allow us to "think interference freely" (Sutton 1998) and renounce the metaphysical constraints of CCTM. The move beyond singularism requires both (1) the rejection of the causal criterion of mnemonicity, and (2) the restructuring of the traditional criteria of memory individuation.

## Session 5B: Epistemology

*Memory and Testimony as Generative Sources of Knowledge*  
Aviezer Tucker (Harvard University)

Contrary to received dogma, memory and testimony can generate new knowledge separately and in collaboration, rather than exclusively preserve and transmit knowledge generated empirically or a-priori. I distinguish first what is a basic rather than derived source of knowledge and then show how reliable memories and testimonies can be exclusive, basic, and generative, sources of knowledge by constructing narratives and colligation. Then I demonstrate probabilistically how even unreliable memories and testimonies can generate knowledge without relying on other basic sources of knowledge, as long as they are independent of each other the sense that they do not transmit information to each other and the prior probabilities of the knowledge they generate is sufficiently low or high (but not in-between). Trivially, often, testimonies rely on memories and memories are reported testimonially. Testimonies to memories of different people can be epistemically significant though in ensuring the independence of memories that may be questionable when they reside in the same mind. Memories and testimonies can generate then together knowledge without relying on empirical or a-priori basic sources.

*The RR Principle*  
Lawrence Wang

The KK principle suggests that knowing proposition  $p$  entails knowing that one knows proposition  $p$ . The RR principle, as we describe, suggests that remembering entity  $x$  entails that one remembers that she remembers  $x$ . While not discussed outright as such, RR meets controversy parallel in relative strength to its epistemic sibling.

We first argue that RR is epistemically advantageous in questions of mnemonic metaphysics to KR, a hybrid principle which suggests that memory entails knowledge of such memory. In contrast to KR, RR allows us to ask a metaphysical question about the nature of memory, rather than a translated epistemic certainty question about memories. Cases of memory are pervasive to both theoretical and pragmatic claims about epistemic mental states and verification. While discrimination about the role of memories in belief form and justification is vital, we demonstrate the underlying structural parallel between the meta-epistemic principle (KK) and the meta-mnemonic principle.

Intuitively, RR is available as a verification of the presence of some memory  $x$ . Remembering  $x$  is verified in relevance (or aboutness) to both 'remembering' and 'x' by way of a recall that such memory does pertain to the specified object  $x$ . This designates any memory about which we can attribute a status as memory—which denotes a special distinct relation to object  $x$ —bona fide precisely because the memory itself is cognitively linked to  $x$ , or remembered in relation to  $x$ . Key

arguments for and against KK have similar analogs for RR, though RR does possess unique problems and motivators. We isolate among the parallel conditions the question luminosity and Williamson's degree reductio, and the possibility of external warrant for memory. Unlike its analogue with knowledge, the causal theory of memory is relatively orthodox; we explain this as consistent with RR. In one direction the causal connection is necessary for the RR justification of the status of a memory; in the other, the recursive grounding relation for memory being a memory-relation entails a universal type for the memory-relation for which a weak causal connection is the adequate expression for both immediate and mediate relata. Accepting both allows us to subvert an entailment relation between memory and belief justification while preserving a truth relation by entailment of memory as memory. Moreover, the ontological commitments are lesser than KK: by RR, a weak epistemic-like theory of memory converges with a similarly deflated causal theory, while offering a more complete explanation of memory-grounding for diverse cases.

*Memory Generativism and the Epistemic Neutrality of Episodic Memory*  
Tiegue Vieira Rodrigues (Universidade Federal de Santa Maria)

Can memory generate positive epistemic status? The prevailing philosophical opinion says that it can't, and that memory is a mere tool or capacity for preserving or transmitting justification from one belief (or other mental states) to another, this position is generally known as memory preservationism. But prevailing philosophical opinion is wrong. Memory can generate positive epistemic status. Memory generativism is true. That is my thesis. In this essay, I offer and examine a particular case in which a subject arrives at a certain belief on the basis of a memory process. In this case, the output belief is intuitively epistemically justified. And yet it is not plausible the belief inherits all of its justification from any prior beliefs or other mental states involved in the memory process. If this is correct then we must recognize that memory can sometimes generate epistemic justification rather than merely preserving or transmitting justification that a subject already possesses to the output belief of the memory process. We should include memory in the list of mental states and processes, such as perception and justification, that function as basic sources of positive epistemic status (knowledge/justification). We suggest a way to account for it, and for the case itself, in terms of the relationship between epistemic normative requirements, justification and cognitive capacities. Since my thesis depends on the plausibility and efficacy of the presented case there is a parallel view that will also need to be defended. Given that contemporary analytic epistemologists are mainly interested in propositional knowledge, when it comes to memorial knowledge/justification they are primarily interested in propositional memory (or semantic memory) - more generally, they

focus on mental contents, states and attitudes that are propositional in nature. This is because taking such mental contents to be propositional provides a simple account of how our mental states can establish true-conditions. The case I will present and discuss involves a belief being formed via a memory process that is grounded in episodic memory. But if episodic memory is (as it traditionally is) conceived as having propositional content, then creationism about memory will not be able to deliver the result we want, namely, to genuinely generate positive epistemic status without inheriting all of its justification from any prior beliefs or other mental states involved in the memory process. Thus, in order to support my case and effectively supporting memory generativism, I will argue that episodic memory does not have propositional content and, consequently, that it is epistemically neutral. In section 1, I distinguish between different versions of preservationism and generativism about memory and explicate certain limitations of recent defences of generativism. In section 2, I present a novel argument for genuine epistemic generativism about memory, based on a specific case. In section 3, I argue for the epistemic neutrality and non-propositionality of episodic memory. In section 4, I consider various objections to our case for generativism and argue that none of them works.

## Session 5C: Episodic memory

### *Self-Referential Memory and Mental Time Travel*

Jordi Fernandez (University of Adelaide)

Episodic memory has a distinctive phenomenology, and one way to capture what is distinctive about it is by using the notion of mental time travel. The thought is that, when we remember some event episodically, we ‘mentally travel’, or we are ‘mentally transported’, to the moment at which we experienced it in the past. By contrast, when we semantically remember that the event happened in the past, there is no analogous experience of mental time travel in memory. The trouble for this way of distinguishing episodic memory from semantic memory is that, appealing as it is, the metaphor of mental time travel is only a metaphor. We have no clear notion of what the experience of mental time travel is. In this paper, I suggest that a certain view about the content of memories can shed light on the experience of mental time travel. This is the view that memories have a self-referential content: When a subject remembers an event episodically, their memory represents itself as coming from a perceptual experience of the event. Accordingly, I propose that the experience of mental time travel is the experience of representing one of the elements in this complex content, namely, the past perceptual experience of the remembered event: The experience of mentally travelling to the time at which we experienced some event in the past is, I suggest, the experience of representing a past experience of the event. In defence of this proposal, I offer two considerations. Firstly, the proposal is consistent with the idea that memories enjoy a temporal phenomenology (specifically, a feeling of pastness). Secondly, the proposal is consistent with the possibility that mental time travel is an experience which can be oriented towards the future as well as towards the past. I argue that the received notion of mental time travel is in tension with those two ideas.

### *Episodic Recycling*

Sara Aronowitz (Princeton University)

We use information to update our current beliefs and credences: indeed, on some accounts, this is the only (epistemic) use we make of information. From this starting point, it’s natural to see the epistemic role of memory as an issue of how memory provides information with which to update our beliefs. However, there are also secondary uses of information. Information that has already been used for updating can serve to fill in imaginative scenes, explore counterfactuals, and derive analogical structures. Further, not just previous-incorporated information, but “information” that is unsuitable for updating, because it is incomplete, inaccurate or contradictory, can play these roles too. This paper makes the case that a rational agent would encode some memories in episodic format in order to maximize this secondary processing (or recycling) of information.

The first part of this paper proposes a series of secondary processes that operate on remembered information. These secondary processes should be independent from the primary, updating process, and so the criterion for being a secondary process is that the function could be served even if the information is unusable for the primary, updating function. For example, I might have misheard my brother referring to his cat as a potato, and formed a series of incorrect impressions as a result - that the cat is brown and fat, and that my brother is very fond of him. Once I find out that I had misheard, what use do I have for these impressions? Entertaining non-actual and even impossible scenes and episodes helps to make explicit my commitments, beliefs and inferential patterns. Manipulating and abstracting from these impressions can be part of analogical reasoning. And understanding how I self-corrected from these misleading impressions can form a pattern for future correction.

In the second part of the paper, I argue that these processes highlight a particular advantage of memories in an episodic format for information recycling. Episodic and semantic encodings of a single event might in principle contain the same information, albeit in a different format. And for updating, content is far more significant than format. However, when it comes to the secondary processes, format is conversely more significant than content. An episodically formatted scene can serve as a vicarious experience, and can be used to map false impressions onto correct ones. Overall, these theoretical arguments suggest a new aspect to the episodic/semantic distinction in memory: episodic encoding makes sense if we are encoding information not just to use, but also to recycle in imagination and simulation. Thus, this bounded-rationality argument lets us see the growing empirical evidence about the interrelation of episodic memory and (certain kinds of) imagination in a new light.

### *The Benefits of Hindsight*

Ali Boyle (University of Cambridge)

Why do we have episodic memory? The question is a difficult one for two reasons. First, there is no obvious benefit associated with remembering information relating specifically to past events, given that those events will never come again. Second, even if remembering information about past events were useful, it seems we could store such information using our general purpose capacity for semantic memory. So, episodic memory looks at at worst useless and at best redundant – making it difficult to see how it could have evolved. According to some, the mental time travel framework offers a response to this problem. On this increasingly popular view, episodic memory and imagining the future are two sides of the same coin. Both are exercises of a more general capacity for mental time travel – the capacity to mentally project oneself into the past and the future, in order to imaginatively simulate past and future events. Viewed in this way, the question of episodic

memory’s evolutionary origins instead becomes one about the origins of mental time travel: why might humans have evolved such a capacity? Advocates of the mental time travel framework propose that the answer lies with the benefits that come with imagining the future, rather than those of remembering the past.

I argue that this replaces one mystery with another – since it is no more obvious that imagining the future confers adaptive benefits than that episodic memory does. The problem, again, is one of redundancy: if representing future events is useful, we could do this simply by thinking about the future, without imaginatively simulating future events. So, what is the point of a system that enables us to do the latter?

I propose that the answer lies in the distinctive way in which imaginative simulation makes information available to subjects. When we episodically remember or imaginatively simulate events, we construct rich, dynamic, spatial representations, which unfold over time and through which we can mentally ‘navigate’. In these respects, imaginative simulations are similar to the mind palaces used by memory champions. These are visualised spaces containing locations or ‘loci’ to which bits of information can be indexed. The information can be retrieved later by ‘revisiting’ these locations. This is, in effect, an episodic or simulative strategy for the retrieval of information typically associated with semantic memory – information which might not otherwise be readily retrievable. I argue that in a similar way, mental time travel functions as a natural mind palace, in both its backward- and forward-looking manifestations – making semantic information available to subjects which would not otherwise be retrievable. As a result, mental time travel confers epistemic advantages on creatures which have it. I argue that these epistemic advantages are likely also to have been selective advantages, and so to have driven the evolution of mental time travel. Since these benefits are associated with both past- and future-directed mental time travel, this account implies that the benefits of hindsight and those of foresight are on an even evolutionary footing.

## Session 6A: Memory in the history of philosophy

*Why Aristotle Assigns Memory to the Past*  
Evan Strevell (Xavier University)

Commentators on Aristotle's *De memoria* observe that he restricts what he calls *μνήμη*—usually rendered “memory”—to what is past (*τὸ γενόμενον*). Yet his remarks on why memory concerns only what is past are so terse and tightly packed that it is hard to see whether there is an intelligible argument to be made out, or merely a series of declarations. I unpack and reconstruct his account, with the help of the *De anima*, on which the *De memoria* is explicitly dependent, to show that Aristotle supplies an argument. In addition to offering an interpretation of Aristotle's account, I explain his purpose for it, which is to discriminate memory from other cognitive capacities. Hence, linking memory with the past is crucial for working out its definition and for appreciating Aristotle's entire treatment.

Even if one is inclined to agree with Aristotle that memory is limited to prior matters, Aristotle should be able to give it its own peculiar object. He asserts that in clarifying a capacity one must previously deal with its activity and prior to this its object (*De anima* ii 4). Without a definite object memory may not be a distinct cognitive capacity. But not everyone agrees that memory is exclusively of past matters. Norman Malcolm (1977, 13-15) and Richard Sorabji (1972/2006, 13) insist that Aristotle misrepresents memory by limiting it to past matters, because it makes perfectly good sense to speak of remembering present and future things. For example, we readily allow that I remember what my pin number or password is, or that I have a dentist appointment three weeks from now. Aristotle himself mentions that people often err in correctly articulating what the memorable objects are (*De memoria* 449b9-10). Hence, he needs to defend his position. Otherwise we can well doubt that he demarcates a natural kind, memory, rather than merely suggests an arbitrary concept, assigning features to it and stipulating its definition.

In my first section, I lay out Aristotle's procedure for investigating soul faculties and how the case of memory presents special difficulties. In the second section, I argue that Aristotle limits memory to the prior cognitive activity of the animal that possesses memory. Memory in its principal sense for Aristotle corresponds roughly to episodic memory of things we have seen or done or learned. I argue that Aristotle articulates a principle by virtue of which memory is definitively distinguished from other forms of cognition, which is a denial that memory can have as its object any object in actuality present. Instead, memory engages a representation (*φαντασία*) of the remembering subject's former cognitive activity. In the third section, I show why Aristotle embraces this denial and is right to do so. We might be tempted to conceive of memory as broadly naming any cognition that involves the retrieval of information previously acquired. I argue that within Aristotelian psychology taking memory as any such retrieval of information previ-

ously acquired makes memory no different from opinion and knowledge, thereby failing to pick out a cognition differing in kind.

*The fundamentality of motion to memory in Aristotle's theory*  
Marcos Júnior Junges Panciera (Universidade Federal de Santa Maria)

This work presents an approach to Aristotle's concept of memory, *μνήμη*, through grounding relations, emphasizing the relations of memory and motion. Often memory is investigated in relation to physical time, *χρόνος*, which is evidently an entity fundamental to memory. Due to the fact that there is memory only when time has elapsed, which is past. Nonetheless, this traditional approach commonly is less attentive to other grounding relations that memory has. Motion, to be more precise, change, *μεταβολή*, is one of these fundamental entities that grounds memory. As time is symmetrically dependent of change, likewise change is dependent of time, both are primitive and fundamental to memory in a way that these entities physically ground the psychophysiological existence of memory in some animals, including humans. Animals which have capacity to perceive time, as well, capacity to perceive change, that is, perceptive faculty, *αισθητικόν*, are the animals that potentially have memories. Therefore, to further comprehend memory in Aristotle theory, the ways change ground memory need to be understood. In this analysis this ways are divided into two, external, i.e., physical, and internal, i.e., psychophysiological. Hence, in the physical way change is fundamental to memory, all perceptible existents are subjected to change, the perception is only of sensitive objects, thus objects subjected to change. And memory is formed from perceptions, being so there is memory only of sensitive objects, objects that may change, and when change has occurred - a temporal actualization. Thence, in the psychophysiological way change is alteration, the motion which the sensitive soul incurs when remembering and actualizing to form memories from the potentiality of perception.

*Can Memory be future-oriented? A Mental time travel in/to the Middle Ages*  
Véronique Decaix (Université Paris 1 Panthéon Sorbonne)

During the Middle ages, many commentaries were produced on Aristotle's *De memoria et reminiscencia* (On Memory and Recollection), discussing this source-text in questions such as “What is the proper object of memory” or “Whether memory is of the past”. In this talk, my purpose is to focus on John Buridan's original position in his *Quaestiones De memoria* where he supports the assertion, against Aristotle, that memory can be of the future. My aim is to explain the logical and metaphysical arguments which allow him to admit the possibility of a future-oriented memory. This will lead to a more general assessment of the shift his theory initiates in the explanation of the memory process in medieval psychology.

## Session 6B: Episodic memory

*The Normativity of Mental Time Travel - Or: How do I correctly travel through time?*

Alma Barner (University of Antwerp)

In the current literature on the nature of episodic memory and mental time travel surprisingly very little work engages systematically with carving out the normative properties of both memory and imagination. If this topic touched upon, it is primarily done implicitly by carving out the epistemic properties of episodic memory and more specifically, ontological differences between different kinds of faulty memories, such as apparent memories, false memories and confabulations (cf. for example Michaelian (2016a), Michaelian (2018)). When are imaginings correct and when do they go wrong? Are episodes of future-oriented mental time travel correct only if they accurately represent the future? What are the correctness conditions on episodic counterfactual thought and how are they distinct from norms on other types of past-oriented episodic thought? In this paper I focus on this neglected topic and present an account of the normative properties of different types of mental time travel. More specifically, this paper argues that substantial differences exist between the norms that govern episodic imaginings and the norms that govern memories. This in turn has important implications for understanding their epistemic nature and cognitive functions. The result is an independent argument in favor of narrow discontinuism (cf. Michaelian (2016b)). In the first part of the paper I focus on imagination. As I have argued elsewhere, we can fully explain the normativity of episodic imagination by appealing to context-relative hypothetical norms. I first present the gist of this view. I then explain how it applies to and enables us to distinguish between normative properties of future-oriented mental time travel, episodic counterfactual thought and other types of episodic imagination, such as daydreaming or the simulation of other people's mental states. The view presented is inspired by accounts of (the normativity of) scientific models (cf. van Fraassen (2008), Frigg (2009), Frigg & Nguyen (2016)). In this section I argue that episodic imagination in its nature neither aims to model the future, nor a specific set of possible or counterfactual situations (even though instances of it do, of course). Episodic imagination is not intrinsically normative. Hypothetical norms are instrumental norms that specify rational requirements that are conditional on purposes an agent has. The view presented captures what I consider to be important ontological properties of episodic imagination: its voluntary nature (both content and occurrence are often subject to the will), its reconstructive nature and the diverse cognitive roles it plays. While the normative discontinuism I argue for entails epistemological discontinuism, the paper also draws attention to the fact that the cognitive function of imagination outstrips its epistemic function (in other words, it entails functional discontinuism). In the second part of the paper I argue that episodic memory, narrowly under-

stood, is governed by norms that are importantly distinct. Despite its constructive nature, episodic memory typically aims to represent the past. Yet to explain this aim, appealing to context-sensitive hypothetical norms is insufficient. Episodic memory is intrinsically normative. To be clear, episodic memory does not necessarily aim to represent the past accurately. Whether and to what degree accuracy is a correctness condition of instances of remembering depends on purposes of use in cognitive projects. Nevertheless, - appealing to the analogy with models -, remembering is modelling of a very specific subject matter or domain: the lived past. Episodic imagination is not domain-specific in this way. The result is an account that distinguishes between our ability for episodic memory on the one hand, and episodic imagination (episodic counterfactual thinking, future-oriented mental time travel) on the other. In this regard it invites us rethink prominent views, such as De Brigard (2014), for example.

*A Hybrid Theory of Event Memory*

David Menager (University of Kansas)

Dongkyu Choi (Agency for Science and Technology Research)

Sarah Robins (University of Kansas)

Recently, debates about theories of memory have focused on the ability to explain different forms of memory error (Robins, 2016; Michaelian, 2016). Evidence suggests that there exist qualitatively distinct mechanisms behind two such errors: misremembering and confabulation. For any theory of human memory, it is important to draw distinctions between these types of memory error, so as to elucidate when people remember specific events and when they remember events from generalized representations. Although simulationist perspectives explain confabulation, they do not elegantly handle misremembering. Conversely, causal theorists can explain misremembering, but struggle explaining confabulation. There is no existing theory of memory that can explain both of these aspects, and we propose a new hybrid theory that stores both instance-level and schematic representations in hierarchies to unify the causal and the simulationist views. This view is driven by research in artificial intelligence aiming to model human-level capabilities for reasoning about events and event structure. In this paper, we lay out the basics of our theory and its advantages:

- The memory for events is a long-term memory that stores episodes and event schema;
- Episodes are propositional representations of specific events whose contents are descriptions of the agent's perceptions, beliefs, goals, and intentions;
- Event schema are first-order propositional templates that summarize similar memory elements in a probabilistic manner;

- The elements of event memory are organized in a hierarchical manner such that higher-level elements in the hierarchy contain probabilistic summaries of the lower-level ones; and
- Remembering involves performing inference over the probability distributions contained in memory elements.

Our theory unifies aspects of the causal and the simulationist theories by employing hierarchies, such that episodes are the lowest-level elements and are causally linked to actual events. On top of these, there are layers of event schema, which are probabilistic summaries of similar episodes, as well as summaries of lower-level schema. These schema are aggregate representations with characteristics of semantic memory elements that no longer maintain a causal link to a specific event. The resulting hierarchical structure affords our theory its hybrid quality.

The viability of our theory as a model of human memory depends partly on its ability to explain successes and failures of memory usage. Our claim is that hierarchical organization accounts for the different kinds of memory error. Successful remembering occurs when the system retrieves the right memory element, episodic or schematic, and the inference process returns true beliefs. Misremembering happens when the agent accurately retrieves a schematic representation of the target event, but the memory system infers false-positive beliefs resulting in an incorrect reconstruction of the event due to the probabilistic nature of remembering in our theory. Our theory can also explain both veridical and falsidical confabulation, with the system retrieving a higher-level event schema than the target event and inferring either correct or incorrect beliefs, respectively.

Our hybrid approach is an important step toward understanding the nature of human memory systems. We believe it will serve as a basis for innovative research in cognitive science.

*The Significance of Episodic Memory*  
Simon Brown (Columbia University)

Consider a creature who does not have episodic memory, but does have related capacities - semantic memory, including semantic memories concerning particular past events (e.g. remembering that during the 2006 World Cup Final, Zidane headbutted someone without being able to remember seeing it), and memory featuring imagery which is not about particular events (e.g. remembering generally what Zidane looks like, without remembering a particular experience of him). Would adding episodic memory to such a creature radically change the sorts of things that creature could do - would it change the kind of mind that creature had? I will argue that this question - the cognitive significance question - is both important and more difficult to answer than one might think, but I will suggest ways of answering it which could lead to fruitful empirical research projects. The question

is important for a few reasons. First, it is important to how we define episodic memory: if a certain cluster of features is highly cognitively significant in this sense, but other combinations of features are not, this is one reason to prefer a definition of episodic memory in terms of the significant cluster. Furthermore, it is relevant to the growing literature on the evolutionary function of episodic memory, although answering it will require a different kind of evidence, and it is possible for answers to the two questions to come apart. Answering the cognitive significance question is more difficult than one might think because some of the most natural reasons to give for thinking episodic memory is significant turn out to be wrong: many abilities we might think episodic memory is required for in fact can be grounded more effectively in simpler kinds of memory. But there are ways of answering the question which both show how episodic memory could be cognitively significant and suggest fruitful research projects. I show that from the perspective of modelling cognition in terms of AI, there could be certain kinds of learning algorithm which could allow subjects to learn about a much wider range of complicated features of the environment than alternative methods of learning, and which depend crucially on the distinctive combination of features which I think are distinctive of episodic memory. A rich, exciting empirical project could involve developing different versions of these sorts of algorithms in detail, investigating the conditions under which they are effective, and seeing how far they map onto the brain.

## Session 6C: Various

### *A Two-Part Account of (Falsely) Remembering Emotions*

Urim Retkoceri (Ludwig-Maximilians-Universität, Graduate School of Systemic Neurosciences)

Whether it is possible to remember emotions per se has been investigated only sparsely. Here I will take a closer look at two questions: A) Can emotions be remembered? B) If yes, could there be a way to ‘falsely remember’ emotions?

Since there are no agreed upon general definitions of emotion or memory, I will opt for a pragmatic approach and pick phenomena of interest (posttraumatic stress (PTSD) and generalized anxiety disorder (GAD)) as a model to be described. Accordingly, to answer the first question (A), I will distinguish two forms or parts of emotions, an implicit and an explicit one.

The implicit part is roughly what (behavioral) scientists equate with emotions, namely a certain set of physiological responses. Since physiological changes in response to the same stimuli can plastically change (which is taken to be a form of learning), it has been proposed that it is possible to remember implicit emotions.

The explicit part can be described by a feeling account of emotions, that is, an emotion is a subjective phenomenological experience. For example, perceiving a tiger or remembering perceiving a tiger can lead to an explicit emotion of fear. What is unclear is whether every emotion is a new one or could be remembered. I propose that a new explicit emotion and a remembered one can ‘feel’ the same (no phenomenological difference), but are distinguished by their causal history. Two main conditions are set for remembering an explicit emotion: it has to be triggered by the remembering of an event, and the currently felt emotion and the emotion felt at the time of that event have to be sufficiently similar. Importantly, this similarity has to counterfactually depend on the past emotion (and not be due to coincidence).

The implicit and explicit parts of emotions are combined into one framework, in which an event can trigger each of them independently, and interactions between the two parts are laid out based on empirical data.

To investigate the question (B) of what falsely remembering emotions might be, I will keep the distinction between implicit and explicit emotions and argue that each of them can be false in their own way.

For the implicit part, I will analyze recent suggestions that plastic changes of physiological responses without exposure to stimuli from events constitute its falsity, given that such occurrences seem to be present in the phenomena of interest (PTSD and GAD).

For the explicit part, it is important to keep apart whether the emotion is considered ‘false’ (for example, unfitting) or the memory is ‘false’ (in terms of mnemonic confabulation). I will conclude by showing that the fittingness approach (whereby fitting emotions represent reality) is a strong contestant in this regard but is ultimately too unspecific

to capture explicit emotions. Thus, to give a sensible analysis of how memory of the explicit part can be false, it will be necessary to extend existing accounts such as the fittingness approach.

### *Remembering the painter case*

Guilherme Corrêa (Universidade Federal de Santa Maria)

The relationship between memory and imagination is a topic of long-standing debate in philosophy of memory which motivated the raise of different accounts of episodic remembering. Taking an elementary characterization of episodic memories as memories of events that subjects experienced previously, the discussion may be presented by the opposition between disjunctivism and continuism. According to disjunctivist accounts of memory, memory and imagination are different kinds of states, whereas continuism holds that there is no fundamental distinction between remembering and imagining. Causal accounts of memory endorses the disjunctivism view maintaining that the similarity between remembering and imagining is only phenomenological. Given that what we take to be memory sometimes is merely imagination, causalism defends that only in cases of remembering there is a causal connection between the experience and the later representation of it. However, this claim conflicts with recent empirical research that suggests that episodic memory is a more general capacity to imagine events (Suddendorf and Corballis 1997, 2007; Schacter et. al. 2012, Michaelian 2016b). Notwithstanding, Martin and Deutscher (1966) had proposed an unusual case in which apparent remembering is taken to be mere imagination. In the painter case, a person is asked to paint something imaginary, but for some reason, taking themself to paint a purely imaginary scene, they paint an actual and past scene that they have previously observed. For Martin and Deutscher, the reason why the person paints the scene is that they are remembering the scene, although they do not believe it. In arguing this, they are reckoning the philosophic tradition according to which memory and imagination differs by the fact that only the latter is “accompanied by a feeling of belief which may be expressed in the words ‘this happened’” (Russell 1921, 176). The painter case leads us to the problem of indistinguishability, which may be understood as the question of how and why genuine and false remembering can be indistinguishable from the point of view of subjects. Martin and Deutscher avoid the problem since they do not require that a person must take their representation as a memory or being about a past event in order to be considered as remembering, which makes their causal account somehow counter-intuitive at this point. My goal is to deal with this puzzle denying that it is an episodic memory and arguing that if causalism pretends to explain the difference between episodic memory and other forms of memory or episodic thinking, then it must reject the painter case as a genuine episodic memory. I follow Debus (2008) critique, according to which the intuitive example is a circular argument, given that it appeals to memory in order to explain memory. I try to go further on the

critique and to propose a different solution that requires that episodic memory combines correct representation of the past events which one experienced [what is explained by the causal connection] and the appropriated phenomenology [a condition that requires that the person represents the relevant event as something past and actual].

*On the possibility of non-history: infancy, inexperience and the narration of childhood memories of the nineteen-seventies in Italy*  
Rachelle Gloude-mans (University of Amsterdam)

In memory studies, the reconsideration of the binary opposition between media as mass, popular, and artificial on the one hand, and memory as lived, authentic, and experienced on the other, has led not only to the idea that memory is necessarily mediated, but also to inclusion of the insight that experience no longer coincides with knowledge, but with authority, or rather with the power of discourse and narration. Such narrations are often grounded in mutually exclusive categories of collective memorial discourses. Consequently, the presence of the child, whose memories do not coincide with either of the collective discourses, is marginal and highly ambiguous in collective memorial spaces.

Departing from the premise of the child as ‘inexperienced’, this paper asks how the point of view of the child protagonist offers a critical stance on memory politics, not because it reinterprets historical events from a different perspective – as is often the case with counter-memories –, but because the child figure is potentially able to give voice to those who do not have access to memories of ‘grand historical events.’ This paper hypothesizes that the point of view of the child is able to transmit fragments of a ‘non-history’, i.e. a memorial narrative that is anchored in a determined historical time frame, but does not rely on the communal topoi of collective memory. Through a theoretical analysis of the relationship between the mediation of collective memory, the symbolical weight of discourse and the concept of infancy (Agamben 1978; Scurati 2006), this paper attempts to distinguish the conditions under which such a ‘non-history’ is able to take shape.

This research then takes the hyper-presence of literary and cultural representations of the nineteen-seventies in Italy and the continuous re-mediation of the texts, images and language of the violence of the ‘Years of Lead’, as an example of the way in which a collective discourse dominates public memorial spaces. The theoretical approach will be explained and exemplified through an analysis of the narrative and cinematographic techniques associated with the point of view of the child protagonist in Daniele Luchetti’s *Anni felici* (2013), in which the adult public perception of the nineteen-seventies and affective childhood memories of everyday life are being negotiated. This analysis attempts to show that the child protagonist inhabits a potential ‘mute’ space between language and discourse, between telling and showing and between collective memory and counter-memories. While this ‘in-between condition’ leads to his or her exclusion from a collective experience of the ‘Years of Lead’, the child figure is at the same

time potentially able to propose an alternative narrative – a fragment of non-history – that might reinvent memory in the light of childhood fantasy and innocence.

## Session 7A: Other forms of memory

### *Memory for Future Action*

Thor Grunbaum (University of Copenhagen)

I lie in bed in the morning and decide to fill in my tax form in the evening. In between the morning and the evening, I do not give it much thought. In the evening, I fill in the form because I made up my mind to do it in the morning. When recalling my intention to fill in the form in the evening, I do not reconsider my decision. Often, I do not need to make up my mind again and re-endorse the action. When recalling my intention, I simply consciously intend to fill in the form.

A number of important implications follow from this common-sense picture of temporally extended human agency. First, the agent can retain her intention in long-term memory over considerable stretches of time. Second, the motivational profile of an intention (the agent's commitment and action-readiness) is also retained in long-term memory. When bringing her intention to mind in the evening, her intention comes to mind as an intention, i.e. with the motivational force of an intention. Third, recalling an intention involves some form of selection among a plurality of relevant intentions retained in long-term memory. Agents make decisions about future actions continuously throughout the day. Consequently, at any given time, many intentions are retained in long-term memory. Selecting the right intention at the right time from long-term memory is crucial for rational temporally extended agency.

In this paper, we will argue that the long-term memory involved in retaining one's intentions over time and bringing them to mind again, when the agent needs it, is a special kind of memory. This kind of memory for intentions is distinct from retrospective memory (for instance, episodic forms of memory, like recognition memory). Memory for intention has a distinct type of content, function, and cognitive dynamics. We provide a computational account according to which intentions are represented in long-term memory by information relevant for attention, motor execution, and the rational role of the intention in a larger goal-hierarchy.

The aim of the present paper is to present the account and a number of theoretical reasons for accepting it. Ultimately, the reasons for accepting (or rejecting) it will be empirical. The development of experimental paradigms to test the model is being pursued in a different context. The present paper will present two sets of independent theoretical reasons for accepting something like our computational account of memory for intentions. The first set of reasons concerns the account's explanatory potential. Our computational account can provide us with explanations of well-known effects of cognitive control. The second set of reasons concerns the account's ability to address two *prima facie* puzzling phenomena of prospective memory (the first concerns the cognitive cost of intending and the second the control of memory).

*Kinetic memories: an embodied form of remembering the personal past*  
Marina Trakas (CONICET – IDIHCS, Universidad Nacional de La Plata)

Despite the popularity that the embodied cognition thesis has gained in recent years, memories of events personally experienced are still conceived as disembodied mental representations. It seems that we can consciously remember our personal past through sensory imagery, through concepts, propositions and language, but not through the body. In this article, I defend the idea that the body constitutes a genuine means of representing past personal experiences. For this purpose, I focus on the analysis of motor behaviors and bodily movements associated with the retrieval of a personal memory, which have certain features that make them different than procedural memories, pragmatic actions and common gestures, as well as other forms of embodied memories found in recent literature. I refer to these as “kinetic memories” and analyse their representative nature as well as their adaptive functions. Kinetic memories are motor behaviours and bodily movements in which some event or action that took place in the past can be seen, because they are an externalisation of the subject's inner intention of representing a past personal experience. Kinetic memories represent a past experience sometimes by imitating a past movement, and other times by exemplifying some aspect of the past experience that was not itself embodied. Furthermore, they seem to facilitate memory recall, which I argue is their adaptive value, although individuals may additionally use them for different social and conversational purposes.

## Session 7B: Various

*Thinking temporal frameworks qualitatively: episodic memory and trauma*  
Nathalia de Avila (Université Grenoble Alpes)

The present communication aims to be a first attempt of responding to the curious tendency of analytic philosophy of memory of thinking mnemonic time only through quantitative measurement, precisely by being mostly preoccupied with the amount of elapsed time between an event and its retrieval. In this sense, this communication is also an attempt of establishing a dialogue between analytic philosophy and the existential comprehension of time that is often attributed to continental Philosophy, psychiatry and psychoanalysis.

The role of the past in autobiographical memory and its generative aspect has always been central for authors like Freud or Galton, for instance in the treatment of neuroses. My initial perception is that mnemonic time there appears as a re- constructor that connects past situations and present states in order to finding its cause or the circumstances that determine someone's actions in a present moment, so that he or she can scape of such behavior pattern. This is intimately linked to existential definitions of time that are found, for instance, in the works of Søren Kierkegaard or Friedrich Schelling, – it is precisely those kinds of definitions, namely those who are preoccupied with diachronic personal changes than interval measurements that I call qualitative approaches to temporality.

The basic intuition of this presentation is that if I expand the comprehension of what time is (in this case, it is more than a number), the relation between episodic memory and time can also be thought in different ways. Normally, memory and time are linked in a causality that leads to the broadly accepted notion that elapsed time is a pre-requirement for memory that allows one to remember something after it was experienced. It obeys a before-and-after relation of events in which the event happens before its retrieval. The dialogue intention I intend to do here is justified by the claim that existential approaches to time allow the understanding of past and present in mnemonic times to be more fluid: in a traumatic state, the problem of time and memory is not present quantitatively, as someone is not confused about which day of the month it is. However, it is present qualitatively: a traumatized person lacks the comprehension that a past lived situation is not the present anymore, which gives the idea that both notions (past and present) are mixed.

*Past-tense Self-Knowledge*

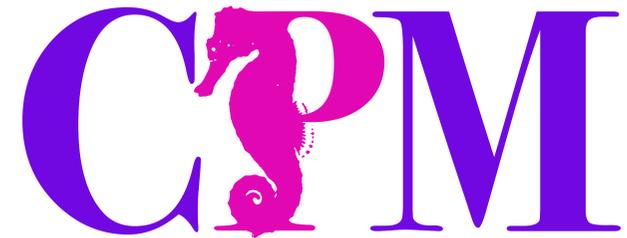
Ben Sorgiovanni (The Queen's College, University of Oxford)

Philosophical debates about self-knowledge have tended to focus on the present-tense case—on how one knows what one, for instance, believes. Questions concerning past-tense self-knowledge—for instance, how one

knows one's past beliefs—have featured less prominently. This is unfortunate. After all, we are normally in a position to know a significant number of our past beliefs. What is the character of such knowledge?

On one view, past-tense self-knowledge of belief is in the paradigmatic case inferential knowledge—knowledge gleaned by inferring from, for instance, the deliverances of memory or one's present doxastic states. Such a view suggests a sharp contrast between self-knowledge of belief in the past- and present-tense cases, respectively. On prevailing models, we can know non-inferentially what we presently believe; we do not have to infer it from our doings, sayings or inner goings-on.

In this paper I defend a model of past-tense self-knowledge which eliminates this contrast by showing that the assumption that non-inferential knowledge is restricted to the present-tense case is false. I argue that in the routine case, one is in a position to know one's past beliefs non-inferentially—by taking up the past rational perspectives to which those beliefs belonged.



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